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APPENDIX D – INTERIM MEASURES REPORT

FINAL CORRECTIVE MEASURES PROPOSAL
FORMER STANLEY TOOLS
FOWLERVILLE, MICHIGAN

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February 2004

earth tech engineering and technology for the planet.

Final Corrective Measures Proposal
Interim Measures Final Report
Former Stanley Tool Works
Fowlerville Michigan

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February 2004

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1.0 INTRODUCTION

Johnson Controls, Inc. (JCI) currently holds Resource Conservation and Recovery Act (RCRA) Corrective Action liability at the Former Stanley Works (Site) located in Fowlerville, Michigan. RCRA Facility Investigations (RFI) and Interim Measures (IMs) have been previously implemented to address immediate threats to human health and the environment, and to define the nature and extent of contaminated media. These activities were summarized in the RFI Report prepared by URS and submitted to the United States Environmental Protection Agency (U.S.EPA) in October 2001. In October 2002, EPA submitted comments on the RFI, along with a draft Administrative Order of Consent (AOC).

Through negotiations with U.S.EPA, a performance based AOC (Docket-RCRA-05-2003-0004) was executed for the Site in December 2002. The AOC required corrective measures be performed as necessary to control current human exposure to contamination at or from the site to within acceptable risk levels. Documentation of control is to be in the form of an Environmental Indicators Report (EIR) describing interim measures performed to meet the requirements of the AOC. In addition, JCI must submit a Final Corrective Measures Proposal (FCMP) describing final corrective measures to be implemented as well as corrective measures taken at the site since the date of the AOC. This report is being submitted to describe the interim measures conducted at the Site in 2003 to achieve the objectives of the AOC.

2.0 PERFORMANCE STANDARDS & SCOPE OF WORK

2.1 Performance Standards

Interim measures were performed in accordance with the AOC and applicable federal, state and local regulations. Target selected cleanup levels used were established by the Michigan Department of Environmental Quality (MDEQ) under the Natural Resources and Environmental Protection Act (NREPA), Act 451, Part 201. The MDEQ Industrial and Commercial II, III, and IV land use categories for soil were selected based on historic site usage, current property zoning, and pending future uses of the property. To minimize migration of Site contaminants into the Red Cedar River, the Groundwater Surface Water Interface (GSI) Protection Criterion was used as the Site cleanup levels. The more restrictive drinking water pathway will be addressed using a deed restriction, eliminating the use of a water supply well at the site.

2.2 Scope of Work Items

The scope of work items performed as part of the Interim Measures included the following:

- Project Preparation
- Mobilization and Site Preparation

- Demolition of Waste Water Treatment Building
- Impacted Soil Removal
- Management and Disposal of Impacted Soils
- Backfill Activities
- Site Restoration
- Demobilization
- Air Monitoring

3.0 PROJECT MANAGEMENT

Earth Tech/Weston (ETW) and ENTACT, Inc. (ENTACT) worked as an integrated team (Project Team) to provide a coordinated approach to the management and remediation of the Site.

The Project Team implemented a communication plan to ensure information was effectively distributed to all team members as well as the U.S.EPA. This included the utilization of a secure, interactive TeamLink web site allowing access to project information, analytical data, team meetings, project updates, and quarterly progress reports to U.S.EPA. The web site was established on February 27, 2003 and remained accessible throughout the duration of the project.

3.1 Project Organization & Responsibilities

Project roles and associated responsibilities for oversight and implementation of Site activities were as follows:

U.S.EPA Region 5 Project Manager, Juan Thomas – had overall responsibility for all phases of work. The Project Manager provided regulatory oversight, reviewed project plans and quarterly reports, and conducted Site inspections to evaluate Site work and progress.

Project Manager, Drew Lonergan, EarthTech and Chris Preston, ENTACT – had the overall responsibility for ensuring that the interim measures were implemented and completed in accordance with the AOC, federal, state, and local regulations.

Field Project Manager, ETW and ENTACT – were responsible for day-to-day implementation of the interim measures, for overseeing the field crew and subcontractors and ensuring that all required tasks were completed and conducted in accordance with the AOC, federal, state, and local regulations as well as approved project specific plans.

Engineering and Technical Support, ETW and ENTACT - assisted with engineering and construction related procedures and ensuring activities were implemented and completed in accordance with the AOC, federal, state, and local regulations as well as approved project specific plans.

Technical and Regulatory Support, ETW and ENTACT - provided regulatory and technical support to ensure activities were implemented and completed in accordance with the AOC, federal, state, and local regulations as well as approved project specific plans.

Quality Assurance/Quality Control, ETW - was responsible for performing required sampling and quality control testing done by the Project Team. Sampling and quality control testing was done in accordance with the AOC, federal, state, and local regulations as well an approved Quality Assurance Project Plan (QAPP) and Sampling and Analysis Plan (SAP).

4.0 PROJECT PREPARATION

4.1 Plans & Permits

The following project specific plans and permits were prepared prior to mobilization to the site or prior to beginning an activity requiring an approved plan or permit.

4.1.1 Community Relations Plan

A Community Relations Plan (CRP) was prepared in accordance with the AOC to outline community relations activities conducted during the implementation of the interim measures The CRP was placed in the Fowlerville District Library and made available for review by the public.

4.1.2 Health & Safety Plan

Each member of the Project Team (EarthTech, Weston and ENTACT) prepared a project specific Health and Safety Plans (HASP). The HASPs described health and safety guidelines developed for Site activities to protect on-Site personnel, visitors, and the public from physical harm and exposure to impacted material.

4.1.3 Soil Erosion & Sediment Control Plan

A Soil Erosion and Sediment Control Plan (SESCP) was prepared in accordance with the requirements of the Michigan Department of Environmental Quality (MDEQ), Part 91 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended and MDEQ Land and Water Management Division, Part 17, Rule 323, 1701-1714 of the Michigan Administrative Code. The SESCP described practices used to reduce pollutants in stormwater discharges associated with activities related to interim measures and to ensure compliance with terms and conditions of the SESC Permit. The SECP was submitted to the Livingston County Drain Commissioner Office Soil Erosion and Sediment Control Division.

4.1.4 CSX Railroad Easement Permit

A Right of Entry Agreement (Number CSX-045662) was obtained from the CSX Rail Road to allow excavation of impacted soils to occur in the southern drainage ditch, which runs parallel to the CSX rail line.

4.1.5 PCB Project Work Plan

A PCB Work Plan was prepared for the purpose of receiving RCRA and Toxic Substance Control Act (TSCA) Coordinated Approval for interim measures related specifically to PCB impacted soils. The PCB Work Plan outlined the sequence, means and methods to address remediation and management of PCB impacted soils. The Plan was submitted to the U.S.EPA Region 5 TSCA Division for review and approval.

4.1.6 Wetland Permit

A Part 303 Wetland Protection and a Part 31 Floodplain/Water Resources Protection permit application was completed and submitted to the MDEQ Geological and Land Management Division (GLMD), Permits Consolidation Unit (PCU) on April 25, 2003. The permit was received on July 2, 2003 (Permit No. 03-47-0042-P). No excavations were conducted in areas that could potentially be characterized as a wetland until the wetlands delineation and approval were received.

4.1.7 Indiana Bat Survey

Prior to clearing trees along the Red Cedar River, a survey was performed by Dr. Allen Kurta, Biological Consultant, to determine if Indiana bats, an endangered species were present on the Site. Based on the survey it was determined the Indiana bats were not present. A report was prepared and submitted to the United States Department of the Interior, Fish and Wildlife Services. A letter from the United States Department of the Interior, Fish and Wildlife Services concurred with the findings.

4.2 Pre Construction Meeting

A meeting was held on February 20, 2003 with the Project Team and the U.S.EPA, Region 5 in Chicago, Illinois. The meeting objective was to present U.S.EPA with an overview of planned activities and approach to implementation of the interim measures.

5.0 MOBILIZATION & SITE PREPARATION

The Project Team field crew mobilized to the Site during the first week of April 2003 and began site preparation activities prior to for full-scale interim measures implementation. Project preparation activities are described below. Prior to beginning Site work, a 14-day notification as required by the AOC was submitted to the U.S.EPA on April 4, 2003.

5.1 Establishment of Work Zones

Work zones were established and delineated by orange construction fencing and signage. Work zones included the following:

5.1.1 Support Zone

The area outside the exclusion zone and contamination reduction zone was used as the support zone. The support zone contained two field trailers to accommodate the Project Team and Site visitors. The support zone provided a controlled environment for administrative tasks and an area for personnel to safely conduct activities outside of the remedial work areas. Parking and sanitary facilities were provided in the support zone.

5.1.2 Exclusion Zone

The exclusion zone(s) (EZ) encompassed areas where remedial work was being performed and areas of the Site where impacted material handling occurred. No one entered the EZ without the appropriate personal protective equipment (PPE), 40-Hour OSHA HAZWOPER training, and familiarity with the HASP. All visitors signed the visitor logbook and read the HASP prior to entering the EZ. The size and locations of the EZ changed as work in an area was complete.

5.1.3 Contamination Reduction Zone

The contamination reduction zone (CRZ) served as a buffer between the EZ and the support zone to prevent the migration of contaminants outside of the EZ. The CRZ consisted of the personnel decontamination facility and the equipment decontamination facility described below.

5.1.4 Personnel Decontamination Facility

A personnel decontamination trailer was provided for personnel and visitors to don and doff PPE as they transitioned between the support zone and the EZ. The personnel decontamination facility was equipped with potable water, showers, sanitary facilities, boot wash and boot rack and appropriate storage facilities for spent PPE.

5.1.5 Equipment Decontamination Facility

An equipment decontamination facility was constructed to properly decontaminate equipment by mechanical means as well as with the use of high pressure, low volume hot water when necessary. Equipment that entered the EZ and was impacted by contaminated materials was decontaminated when exiting the EZ and before exiting the Site. Dry decontamination procedures were used as much as possible to minimize rinse water generation. Rinse water was captured and used for dust suppression within areas not yet remediated.

5.2 Subsurface Utilities and Other Obstructions

MissDig was notified prior to beginning Site work to identify and mark all known utilities. Equipment operators were informed of possible hazards in regard to utilities (i.e., electric, gas, communications, water, sewer, and cable) prior to performing excavations. Caution and awareness of underground utilities and other identified obstructions that remained in place was discussed during daily safety meetings.

5.3 Site Security

The existing chain link fence along Frank Street was used as security fence throughout the project. Signs were placed where needed to limit Site access to authorized personnel. Locks were placed on the entrance gate. Fencing and warning signs were maintained, inspected and repaired as necessary during execution of work. Site visitors were required to check in before entering the work zones, read the HASP(s) and sign the visitor logbook maintained in the ENTACT office trailer.

5.4 Temporary Staging Areas

Temporary staging areas were prepared to stockpile impacted soil and debris generated during remedial activities. The temporary staging areas were graded and compacted to provide a smooth base with perimeter soil berms. Erosion control devices were installed around the perimeter to control sediment and stormwater from migrating into and from the staging areas. Berms were installed to segregate stockpiles based on waste stream designations. For ease of soil management and loading, staging areas were relocated as excavation activities progressed across the site.

5.5 Dust Control Measures

Excavations, stockpiles, access roads, and other work areas were maintained in a manner to minimize the creation and dispersion of dust. Particular attention was paid when excavating impacted areas, demolition of the treatment building, clearing and grubbing, and backfilling and grading operations. Heavily traveled haul roads were wetted with a water truck. Water misters were available during soil handling activities such as excavation, loading, staging and backfilling to control dust emissions. Frank Street was routinely monitored and noted dirt tracked from the site was promptly cleaned. Perimeter air monitoring was performed to measure the effectiveness of dust control measures.

5.6 Erosion & Stormwater Control Measures

Erosion and stormwater control measures were described in detail in the approved SESCP. In accordance with the plan, structural practices were implemented in excavation and staging areas to divert flows from exposed soils and control the discharge of pollutants via stormwater runoff. Erosion control devices were routinely inspected to ensure integrity and effectiveness. Deficiencies noted during an inspection were immediately remedied. The following erosion and stromwater control measures were implemented during the interim measures:

- Silt fence was installed around the perimeter of excavation areas and along the western boundary of the Site adjacent to the Red Cedar River.
- Dikes were placed around the perimeter of excavation areas and in drainage ditches to minimize runoff velocities and prevent sediment removal by intercepting stormwater runoff.
- Earthen berms were constructed around staging areas to prevent stormwater from contacting stockpiles.

5.7 Test Pit Activities

To better define the extent of contamination and the concentration of contaminants of concern, additional soil sampling was performed at the Site to supplement previous investigations and information reported in the RFI. Test pits were installed throughout the southern portion of the property on a 50-foot x 50-foot coordinate grid system (CGS). Composite soil samples were collected at the nodes of each grid at approximately two foot and six foot depths. A combination of field screening and laboratory analysis was performed on each of the soil samples. Soil samples were analyzed for the target constituents, trichloroethylene (TCE), hexavalent and total chromium, and polychlorinated biphenyls (PCB). Results of the test pit sampling activities were posted on the TeamLink web page for review during implementation of the interim measures.

6.0 DEMOLITION OF EXISTING TREATMENT BUILDING

The abandoned treatment building located on the western portion of the site was demolished to grade using conventional construction equipment. Prior to demolition, an asbestos survey was conducted and determined that no asbestos containing material (ACM) was present. A demolition permit was obtained from the Village of Fowlerville on February 2, 2003. A Notification of Intent to Renovate/Demolish was submitted to the MDEQ Air Quality Division on May 1, 2003, in accordance with NESHAP 40 CFR Part 61. All demolition activities were performed in accordance with applicable federal, state, and local requirements and were well planned to maximize personnel safety and efficiency.

A track-mounted excavator with grapple attachment was used to dismantle the metal building in sections. Roll-off containers and flat bed trailers transported the scrap materials offsite for disposal. After the building was razed the underlying slab remained in place due to potential PCBs in the area. The underlying soil was sampled for PCBs, VOCs, SVOCs and metals. Although there were some metals present below the slab the PCB concentrations were less than 3 mg/kg. The concrete slab and subsurface footings were removed in manageable sections and stockpiled for characterization and disposal.

7.0 IMPACTED SOIL REMOVAL

In general, soils determined to exceed the cleanup criteria were excavated using conventional construction equipment. Figure 1a shows the approximate horizontal extent of excavation for TCE, PCB and metals impacted areas. Excavation activities began in the southern most portion of the site in the areas delineated as TCE impacted areas. The excavations proceeded in a manner that minimized on-site trafficking over remediated areas. Excavation ceased if groundwater or the saturation zone was encountered.

The excavations were considered complete when the performance criteria were achieved as confirmed by verification sampling done in accordance with the Michigan Verification of Soil Remediation (VSR) guidance document and the QAPP and SAP. The following sections describe specific soil excavation and management activities performed for the main contaminants of concern.

Summary reports detailing verification sampling were prepared for each soil excavation area. These reports can be found in Appendix A. A photo log of Interim Measures activities can be found in Appendix B.

7.1 TCE Impacted Soil Removal

There were three distinct areas delineated as TCE impacted areas located on the southern portion of the site. These areas were designated as excavation areas A (east) B (center) and C (west). The TCE impacted areas were staked in the field based on historical data as well as information collected during the test pit phase. Excavations began in the east and central impacted areas and proceeded to the west. All of the TCE impacted area excavations were terminated at the groundwater. The excavations remained open until laboratory verification sample results were received to confirm that the TCE cleanup criterion had been achieved.

During excavation activities within the TCE areas of contamination, an 8 inch diameter clay drainage tile was discovered between areas B (center) and C (west). Once the drainage tile and surrounding soils were removed, area B (center) and area C (west) became a contiguous excavation as depicted on drawing 1a.

7.1.1 Fire Suppression Loop

An abandoned fire suppression loop consisting of a 6 inch steel water line was discovered during test pit excavations throughout the southern boundary of the original building footprint. The fire suppression loop transected area A (east) and traveled southwest. The fire suppression loop and surrounding bedding aggregate was removed to prevent it from acting as a potential pathway for contamination to migrate.

During excavation of the fire suppression loop, at the western most point, a buried rectangular steel tank was discovered. Characterization samples of the soils surrounding the tank indicated total petroleum hydrocarbons (TPH) level in excess of the cleanup criterion and required excavation and verification sampling. Soils were excavated until verification samples indicated cleanup criteria were achieved. Excavated soils from this area were transported to the designated staging area, stockpiled and sampled for waste characterization and offsite disposal as non-hazardous waste.

7.2 PCB Impacted Soil Removal

The Project Team requested a TSCA PCB Coordinated Approval for PCB impacted soils, which allowed remediation and management of PCB soils to be conducted in conjunction with the RCRA Corrective Action activities. A PCB Work Plan describing the delineation, characterization, and management of PCB impacted soils was prepared and submitted to TSCA representatives in Region 5 on June 12, 2003. After receiving and addressing comments, the plan was approved via an e-mail dated July 3, 2003. After receipt of approval, work in the PCB delineated areas commenced.

7.2.1 Supplemental Data Collection Activities

Prior to excavating in the PCB impacted areas, further delineation of the vertical extent of contamination was performed to supplement previous site investigations. Sampling and test pitting was done in accordance with U.S.EPA approved methodology as described in a March 31, 2003 letter submitted to the U.S.EPA by the Project Team.

Supplemental PCB soil data was collected by superimposing a 50-foot x 50-foot CGS over the known PCB impacted areas between 1 mg/kg and the cleanup standard of 16 mg/kg for the purpose of establishing areas requiring a restrictive covenant and deed restriction. In areas previously determined to exceed 16 mg/kg, a 25-foot x 25-foot CGS was created to more precisely delineate the impacted areas requiring removal. Samples were collected at the nodes of each grid beginning at the surface and continuing in two-foot depth intervals until the saturated zone was encountered. Samples were submitted to the laboratory for PCB analysis.

The depths and concentration of PCB impacted soils exceeding the cleanup criterion were recorded. This information was used to guide the horizontal and vertical extent of excavation of PCB-impacted soils exceeding 16-mg/kg total PCB concentrations in soils. The total PCB concentration also dictated the manner in which the excavated soil was segregated and stockpiled on Site and disposed of off Site.

Test pits were also installed in the area where expected kerosene free product was present to better define the extent of the free product plume. The pits were allowed to remain open and were periodically observed to determine the infiltration rate of free product and to estimate the amount of free product that was present.

7.2.2. Excavation Activities

PCB excavations began in the two northern most PCB impacted areas adjacent to SWMU A and east of the treatment building. The two discrete areas were approximately 25 feet x

25 feet and were delineated and staked in the field based on historical analytical data. The two areas were excavated to the previously determined depth of two feet below ground surface.

After completing excavation and backfilling of the two discrete PCB areas, excavations proceeded south to the larger PCB impacted area where the suspected free product was located. In general, areas exceeding the PCB cleanup standards of 16 mg/kg were excavated to the indicated depth or until groundwater was encountered. Excavation activities were conducted in a manner that required only the bucket of the excavator be in contact with PCB impacted soils. The excavations were considered complete when the performance criteria were achieved as confirmed by verification sampling. Upon receipt of the verification sample analysis indicating cleanup criteria were met, open excavations were backfilled and restored.

Excavations in the suspected free product area began in the mid section of the area by removing the impacted soil overburden and approximately one foot of existing sand which was disposed of off site as special waste. This middle area was selected as the starting point based on data collected during the test pit phase. The area was left open to allow groundwater and product to accumulate in the excavation. The open area was continually monitored for the presence of an oily sheen. If sheen was observed, booms were used to control the sheen in a localized area. Absorbent pads were used to collect the accumulated oily material. Spent absorbent pads were placed in drums and disposed of as PCB waste. Once the oil was removed and accumulation stabilized, dry soils and fly ash was mixed with the remaining liquids until the material was able to pass the paint filter test for off site disposal. Fly ash was placed along the edge of the excavation and slowly blended into the remaining liquid. The material was then transported to the staging area where it was placed in the appropriate stockpile based on "as found" PCB concentrations. Dried PCB impacted soils were managed in accordance with the "as found" PCB concentrations determined prior to performing drying activities.

A previously unidentified PCB area was encountered along the southern most border of the site to the south of the TCE impacted area. This area was located in close proximity to the fire suppression loop removed during the TCE soil removal. PCB impacted soils were excavated from this area to the existing fence line.

7.3 Metals Impacted Soil Removal

Metals impacted soil removal began in the area of SWMU B along the west side of the property. The limits of SWMU B were staked in the field using historical data as well as information collected during the test pit phase of the project.

Based on information collected during the supplemental data collection phase and while performing verification sampling in SWMU B, a determination was made to conduct a large-scale Site excavation to remove metal impacted soils instead of removing metal impacted soils from discrete areas across the Site. This would ensure all impacted soils would be removed to the GSI criteria and would also simplify the verification sampling process. The new large scale or mass dig effort would require verification sampling on the excavation floors, unless groundwater was encountered and verification sampling of the sidewalls along the northern and eastern termination points. The approximate eastern termination point was determined before starting the mass dig effort by collecting soil samples using a geoprobe from under the old parking lot located on the eastern portion of the site. The final eastern termination point was determined with sidewall verification sampling during the mass dig excavation. The Red Cedar River was the western termination point and the CSX railroad was the southern termination point. The excavation depths extended to the water table with the exception of excavations along the Red Cedar River bank.

SWMUs A and G were not addressed during the mass dig as they were remediated during previous interim measures. Additional sampling done in SWMUs A and G during the interim measures confirmed that additional remediation was not needed.

The mass dig effort began in the northwest corner of the Site along the Red Cedar River bank and proceeded to the east and south. Clearing and grubbing was done in areas to be excavated and along the river bank to allow excavations to proceed uninterrupted. The fence running adjacent to the Red Cedar River was removed to allow access. Debris generated during clearing and grubbing and the removed fence were disposed of off Site.

Portions of the north ditch and areas north of the ditch were removed as dictated by verification sampling. Excavation of the south ditch, which ran adjacent to the CSX Rail line, was completed after receipt of the Right of Entry Agreement from CSX Railroad.

Open excavations were backfilled with imported clean fill and compacted to original grades to promote adequate drainage. Excavated soils were transported with wheel loaders to the staging area and placed in stockpiles. Stockpiles were sampled and characterized for waste disposal.

8.0 MANAGEMENT AND DISPOSAL OF IMPACTED MATERIAL

8.1 Waste Characterization

Based on a review of the historical information concerning the operational history of the facility, it was determined that there was no conclusive evidence that would result in classifying the excavated metals impacted soils as a F006 listed hazardous waste when generated. Therefore, excavated soils from the metals impacted areas were sampled and analyzed to determine if the soil met the Maximum Concentration of Contaminants for the Toxicity Characteristic as defined in Table 1 of 40 CFR Part 261 Subpart C § 261.24.

With respect to the potential sources of TCE in the southern portion of the Site where the presence of TCE impacted soils was identified, it was determined that the TCE-impacted soil, when generated, may meet the definition of the listed hazardous waste F001 and was therefore managed as a listed hazardous waste.

PCB impacted soils were managed in accordance with the total "as found" PCB concentrations determined during the RFI and the supplemental data collection activities.

In general, excavated soils were transported from the areas of excavation and placed in stockpiles in the temporary staging areas. Stockpiles were segregated based on the contaminants of concern or areas of excavation. Stockpiles were sampled and analyzed for the initial waste characterization. Once the initial waste characterization was completed and the landfill waste profile and approval process was complete, the stockpiles were analyzed at a frequency dictated by the receiving facility for the constituent for concern.

Waste Characterization Sample Logs for metals and TCE impacted stockpiles are included in this report (See Tables 1 & 2). Corresponding laboratory reports and chain of custody reports are included in Appendix C.

8.2 Waste Manifests

All truck loads of waste transported off site for disposal were properly manifested on manifests provided by the disposal facilities. With the written approval of JCI, ENTACT representatives signed the manifests on behalf of JCI as an authorized agent.

Original manifests are stored in the ENTACT office located in Westmont, Illinois where they will be archived for the appropriate time period. A manifests log tracking each load transported off site to each disposal facility is included with this report (See Tables 5 & 6). The logs include the manifest date, the manifest and truck number, load tonnage and waste stream designation.

8.3 TCE Impacted Soil Management & Disposal

As stated above, TCE impacted soils excavated from the southern portion of the site were managed as F001 listed hazardous wastes. Twenty nine grab samples were collected from the TCE impacted areas and analyzed for total TCE to ensure the TCE concentrations were below the Land Disposal Restriction (LDR) concentration of 60 mg/kg for disposal purposes. Six of grab samples collected from the newly identified area between areas B and C were analyzed for TCLP metals as well as total TCE.

Approximately 4,300 tons of TCE impacted soils were transported to Environmental Quality Company (EQ) Wayne Disposal Inc Landfill #2 in Belleville, Michigan.

8.4 PCB Impacted Soil Management & Disposal

Excavated PCB impacted soils were managed and disposed of off site in accordance with the approved PCB Work Plan. Excavated soils were transported and placed in the appropriate staging areas based on total "as-found" PCB concentrations. Soils from grids and depth intervals that exceeded 50-mg/kg PCB were staged separately from soils with less than 50 mg/kg PCB. Stockpiles containing soils >50 mg/kg PCB were covered with polyethylene sheeting and secured with sandbags at the end of each workday or when the pile was not in use.

Analytical results for the "as found" PCB concentrations obtained during the RFI or during the supplemental data collection phase was provided to the receiving landfill prior to transporting soils. A corresponding Site map was also provided to identify from which areas of the Site the soil was generated.

Approximately 5,750 tons of PCB impacted soil was transported to the EQ Wayne Disposal Inc Landfill #2 in Belleville, Michigan.

8.5 Metals Impacted Soil Management & Disposal

Metals impacted soils were transported from the excavation areas to the soil staging where it was stockpiled, sampled and analyzed. An initial waste characterization sample was collected and analyzed for the parameters requested by the disposal facility as part of the approval process. Once the waste was characterized and approved, additional grab samples were collected from the stockpiled excavated soils at a frequency of one per 500 cubic yards of stockpiled soil and analyzed for chromium using TCLP analysis to ensure the chromium concentrations were below the Toxicity Characteristic concentration of 5.0 mg/L. After the initial 2,000 cubic yards of excavated soil were sampled, the sampling frequency for TCLP chromium was reduced to once every 2,000 cubic yards.

Approximately 73,500 tons of soils excavated from the metals impacted areas was transported to Allied Waste Saulk Trails Landfill in Canton Michigan as non-hazardous special waste.

8.6 Miscellaneous Waste Management and Disposal

Miscellaneous waste streams generated during the interim measures included the following:

8.6.1 Tree stumps

Tree stumps generated during the clearing and grubbing operations along the river bank and within impacted areas scheduled for excavation. The stumps were characterized as special waste debris and transported to Allied Waste Saulk Trails Landfill for disposal.

8.6.2 Absorbent Pads

The spent absorbent pads were drummed, sampled and characterized for disposal off site. Four drums of spent absorbent pads were generated and characterized as PCB waste. Drums were disposed of at the EQ Wayne Disposal Inc Landfill #2 in Belleville, Michigan.

8.6.3 Purge Water

Seven drums of purge water were generated during the groundwater monitoring well development. The purge water was sampled and characterized for disposal off site. The drums were characterized as F001 listed waste and transported to Dynecol Inc. in Detroit Michigan for disposal.

9.0 BACKFILL ACTIVITIES

Following completion of removal activities and post excavation verification sampling, excavated areas were backfilled with Class II Sand obtained from an off site borrow source. Clay was used as backfill along the Red Cedar River bank for additional structural support and to accommodate heavy river flow. Temporary erosion matting was installed along 450 linear feet of the river bank to ensure vegetative growth and reduce topsoil erosion.

The backfill was transported on site and stockpiled adjacent to the remediated work area. The backfill was placed at a depth necessary to achieve final grade elevations. Backfilled areas were compacted and graded to promote positive drainage and to control any potential ponding of water. The area adjacent to SWMU A is located within the 100-year floodplain. The final elevation in this area was below the original grade to allow increased volume and to accommodate the floodplain. A 6-inch lift of topsoil was placed over the Class II sand and clay layer and prepared for seeding. (See Figure 1b – Final Site Topography).

Samples of each type of backfill (sand, clay, topsoil) were collected from each borrow source and analyzed (See Table 3 – Imported Fill Material). Analytical results were compared to the MDEQ GSI criterion to ensure the soil did not exceed the Site cleanup criteria.

10.0 SITE RESTORATION

All disturbed areas of the site were hydro-seeded with a native seed mix, watered and protected from traffic until a healthy stand of grass was established.

Approximately 2.5 acres of wetland was constructed west of SWMU A within the floodplain area. The wetland area was hydro-seeded with a wetland seed mix. Excelsior matting was placed in SWMU A to prevent erosion and aid in the growth of vegetation.

11.0 DEMOBILIZATION

The field Project Team demobilized on October 17, 2003. Decontamination and office trailers were disassembled and removed from the Site. Construction equipment was decontaminated and demobilized from the site. Temporary electric and telephone service to the office trailers was disconnected.

Decontamination and staging areas were disassembled. Soils underlying the staging areas were scraped and transported off Site to ensure there were no impacts from the stockpiles. Areas where remedial activities occurred were left in a clean and stable condition prior to fully demobilizing from the site.

12.0 RECORD KEEPING AND REPORTING

The Project Team implemented several types of progress reporting throughout the project including daily work reports for construction activities, monthly progress updates (posted on TeamLink) and quarterly progress reports for submittal to the USEPA.

12.1 Daily Construction Work Report

Daily construction reports were prepared by the field Project Team throughout the implementation of field activities. These reports included a list of Site personnel, equipment utilized, work performed, problems encountered (if any) and resolutions, health and safety topics, and related information.

12.2 Monthly Website Update

The Project Team generated monthly progress updates for the Project Team members and other stakeholders. The updates included a discussion of the activities completed that month, a summary of analytical data collected, a discussion of identified problems and solutions, activities planned during the next month and an updated master project schedule. These updates were posted on TeamLink by the 10^{th} day of every month.

12.3 Quarterly Progress Reports

Quarterly Progress Reports were prepared for U.S.EPA submittal. The Quarterly Progress Reports included a description of the activities completed to date, a summary of the analytical data collected during the reporting period, problems encountered and solutions implemented and an updated master schedule documenting the percentage of completion for the project. Each Quarterly Progress Report was posted on TeamLink for project team review and concurrence.

13.0 HEALTH & SAFETY

Each entity of the Project Team prepared a project specific HASP prior to mobilization of the crew to the site. The HASP(s) were prepared in accordance with corporate health and safety policies and Occupational Safety and Health Administration ("OSHA") Title 29 CFR Part 1910.

Prior to the initiation of work, all team members read and familiarized themselves with the approved HASP(s). A mandatory health and safety meeting was held with the project field team to discuss the history of the site and contaminants of concern, health and safety concerns associated with the scope of work, required level of PPE and respiratory protection to be worn during field activities, the lay-out of the work zones, and the procedure for personnel and equipment decontamination.

Daily safety meetings were held by ENTACT and included discussions of work to be performed that day, the responsibilities of the field team members and the associated health and safety issues. Daily safety meeting topics were noted in the Daily Construction Reports.

Decontamination procedures were enforced and the personnel and equipment decontamination stations remained on site throughout the duration of the project. Prior to leaving the EZ, any equipment in contact with impacted material was decontaminated. The EZ was clearly marked and signs posted throughout the project site to remind personnel and visitors of the safety procedures and required PPE.

Exposure of personnel to hazardous substances was controlled through adherence to wearing the proper PPE, which was enforced during all activities where the potential for exposure was present. The level of protection was based on actual site conditions and results of daily personal air monitoring samples.

14.0 AIR MONITORING

The ENTACT on site Health and Safety Officer conducted personal and perimeter air monitoring during remedial activities in accordance with the ENTACT Site specific HASP.

14.1 Personal Air Monitoring

Operators and technicians were equipped with low flow personal air monitors positioned upon personnel in such a way as to obtain a sample from the breathing zone of the worker. Low volume sampling occurred during the initial remedial activities and when there was a change in equipment, processes or personnel. After the initial determination indicated contaminant levels to be below allowable levels for a period of seven consecutive days, PPE was adjusted and no further low volume monitoring was performed for that location or process.

14.2 Perimeter Air Monitoring

As a part of the Health and Safety Program, perimeter air monitoring was conducted during interim measure activities. Air monitoring stations were placed along the perimeter of the Site in three locations, at the east fence boundary on Frank Street, at the south fence boundary along the south ditch and at the west fence boundary adjacent to the Red Cedar River.

The stations were operated for twenty-four hour periods. Samples were collected in the mornings before site activities were initiated. The samples were analyzed for total suspended particulates (TSP) and metals. Sample results were posted in the office trailer.

Perimeter air monitoring was conducted for the duration of the project. (See Table 4 – Perimeter Air Monitoring).

FIGURES

Figures

TABLES

Tables

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Former Stanley Tool Facility

Metals Impacted Soil

Waste Characterization Sampling

Sample ID	Collection Date	Description	Matrix	Chromium (mg/l)
WC-001*	6.11.03	Initial Waste Characterization	soil	**
SSM-001	7.1.03	Stockpile 1 (500 ton)	soil	0.627
SSM-002	7.8.03	Stockpile 2 (500 ton)	soil	0.473
SSM-003	7.8.03	Stockpile 3 (500 ton)	soil	0.329
SSM-004	7.8.03	Stockpile 4 (500 ton)	soil	0.119
SSM-005	7.29.03	Stockpile 5 (2,000 ton)	soil	ND
SSM-006	7.29.03	Stockpile 6 (2,000 ton)	soil	ND
SSM-007	7.29.03	Stockpile 7 (2,000 ton)	soil	ND
SSM-008	8.11.03	Stockpile 8 (2,000 ton)	soil	ND
SSM-009	8.11.03	Stockpile 9 (2,000 ton)	soil	0.017
SSM-010	8.25.03	Stockpile 10 (2,000 ton)	soil	ND
SSM-011	8.25.03	Stockpile 11 (2,000 ton)	soil	0.022
SSM-012	8.25.03	Stockpile 12 (2,000 ton)	soil	0.015
SSM-013	8.25.03	Stockpile 13 (2,000 ton)	soil	ND
SSM-014	9.04.03	Stockpile 14 (2,000 ton)	soil	ND
SSM-015	9.04.03	Stockpile 15 (2,000 ton)	soil	0.019
SSM-016	9.04.03	Stockpile 16 (2,000 ton)	soil	ND
SSM-017	9.04.03	Stockpile 17 (2,000 ton)	soil	ND
SSM-018	9.04.03	Stockpile 18 (2,000 ton)	soil	ND
SSM-019	9.08.03	Stockpile 19 (2,000 ton)	soil	0.024
SSM-020	9.08.03	Stockpile 20 (2,000 ton)	soil	ND
SSM-021	9.08.03	Stockpile 21 (2,000 ton)	soil	ND
SSM-022	9.08.03	Stockpile 22 (2,000 ton)	soil	0.018
SSM-023	9.08.03	Stockpile 23 (2,000 ton)	soil	0.012
SSM-024	9.08.03	Stockpile 24 (2,000 ton)	soil	ND

** WC-001 analyzed for the following parameters:*
TCLP Metals - Method 6010
Flash Point - Method 1010
TCLP SVOCs - Method 8270
TCLP VOCs - Method 8260
PCBs - Method 8082

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Former Stanley Tool Facility

TCE Impacted Soil

Waste Characterization Summary

Sample ID	Collection Date	Description	Matrix	Total TCE (ug/kg)	TCLP Metals (mg/L)									
					As	Ba	Cd	Cr	Cu	Pb	Ni	Se	Zn	Mercury (ug/L)
MM-41-6*	4.30.03	Initial Waste Characterization												
MM-41-10*	4.30.03	Initial Waste Characterization												
GG-41-6*	4.30.03	Initial Waste Characterization												
TCE-001	6.9.03	TCE Area A	soil	69										
TCE-002	6.9.03	TCE Area A	soil	270										
TCE-003	6.9.03	TCE Area A	soil	200										
TCE-004	6.9.03	TCE Area B	soil	820										
TCE-005	6.9.03	TCE Area B	soil	280										
TCE-006	6.9.03	TCE Area B	soil	770										
TCE-007	6.12.03	TCE Area B	soil	1100										
TCE-008	6.12.03	TCE Area B	soil	1200										
TCE-009	6.12.03	TCE Area B	soil	1300										
TCE-010	6.12.03	TCE Area B	soil	1200										
TCE-011	6.12.03	TCE Area B	soil	2200										
TCE-012	6.12.03	TCE Area B	soil	730										
TCE-013	6.17.03	MM41	soil	1000										
TCE-014	6.17.03	MM41	soil	530										
TCE-015	6.23.03	KK41, LL41	soil	130										
TCE-016R	7.2.03	TCE Area C	soil	16										
TCE-017	7.1.03	TCE Area C	soil	1600										
TCE-018	7.1.03	TCE Area C	soil	880										
TCE-019	7.14.03	TCE Area B-C	soil	ND	ND	0.796	ND	ND	0.282	ND	0.686	ND	8.370	ND
TCE-020	7.14.03	TCE Area B-C	soil	ND	ND	0.893	ND	ND	0.163	ND	0.325	ND	5.080	ND
TCE-021	7.14.03	TCE Area B-C	soil	9.9	ND	0.962	ND	0.982	0.395	ND	0.573	ND	1.220	ND
TCE-022	7.14.03	TCE Area B-C	soil	1100	ND	0.776	ND	ND	2.660	ND	6.300	ND	5.280	ND
TCE-023	7.14.03	TCE Area B-C	soil	27	ND	0.844	ND	ND	0.616	ND	0.379	ND	1.050	ND
TCE-024	7.14.03	TCE Area B-C	soil	9.9	ND	0.752	ND	0.067	11.400	ND	7.120	ND	6.760	ND
TCE-025	7.30.03	South of TCE Area B	soil	870										

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Former Stanley Tool Facility
TCE Impacted Soil
Waste Characterization Summary

Sample ID	Collection Date	Description	Matrix	Total TCE (ug/kg)	TCLP Metals (mg/L)									
					As	Ba	Cd	Cr	Cu	Pb	Ni	Se	Zn	Mercury (ug/L)
TCE-026	7.18.03	South of TCE Area B	soil	ND										
TCE-027	7.18.03	South of TCE Area B	soil	ND										
TCE-028	7.30.03	South of TCE Area B	soil	ND										
TCE-029	7.30.03	South of TCE Area B	soil	6.2										

** MM-41-6, MM-41-10 & GG-41-6 analyzed for the following parameters*
TCLP Metals - Method 6010
Flash Point - Method 1010
Total Phenols - Method 420.2
pH - Method 9045
TCLP SVOCs - Method 8270
TCLP VOCs - Method 8260
PCBs - Method 8082

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Former Stanley Tool Facility
Imported Fill Material
Analytical Summary

Sample ID: Date Collected:	BF-001* 6.6.03	BF-002 6.12.03	BF-003R** 9.9.03	BF-004 10.17.03	BF-005 9.9.03	BF-006 9.8.03	TS-001 9.16.03	CL-001 9.24.03
Volatile Organic Compunds (VOCs) EPA 8260 (ug/kg)								
Full 8260 scan								
Benzene	5.4							
Methylene Chloride		8.9						
All other compounds	ND	ND	ND	ND	ND		ND	ND
Semi Volatile Organic Compound (SVOCs) EPA 8270 (ug/kg)								
Full 8270 scan	ND	ND	ND	ND	ND		ND	ND
Polychlorinated Byphenols EPA 3550/8082 (mg/Kg)								
Aroclor 1016	ND	ND	ND	ND	ND		ND	ND
Aroclor 1221	ND	ND	ND	ND	ND		ND	ND
Aroclor 1232	ND	ND	ND	ND	ND		ND	ND
Aroclor 1242	ND	ND	ND	ND	ND		ND	ND
Aroclor 1248	ND	ND	ND	ND	ND		ND	ND
Aroclor 1254	ND	ND	ND	ND	ND		ND	ND
Aroclor 1260	ND	ND	ND	ND	ND		ND	ND
Michigan Metals EPA 3050/6010 (mg/kg)								
Arsenic	3	2.69	3.38	4.16	3.7		2.8	7.42
Barium	7.2	10.4	11.2	16.1	10.8		42.9	54.2
Cadmium	ND	ND	ND	ND	ND		ND	ND
Chromium	4.3	5.03	6.56	6.46	6.29		10.5	13.5
Copper		6.96	11.2	7.73	6.58		7.35	17.6
Lead	2.5	2.56	4.26	4.17	4.05		9.19	7.5
Nickel	5.2	5.96	6.75	7.43	7.35		8.98	22.5
Selenium	ND	ND	0.516J	1.49J	ND		0.997	1.86
Silver	ND	ND					ND	ND
Mercury (EPA 7471)	ND	ND	ND	ND	ND		ND	
Zinc	16	17.5	17.5	25.2	19.6		28.6	44.5
SPLP Selenium (ug/L)				ND				
Wet Chemistry								
Hex Chromium (mg/kg)							ND	ND
Cyanide (mg/kg)							ND	ND
pH							6.57	
Volatile Solids (%)							5.4	

* Source not used due to benzene concentrations
** BF-003 resampled due to sample temperature outside of acceptable range when it arrived at lab

Table 4
Former Stanley Tool Facility
Perimeter Air Monitoring
Analytical Summary

Air			Contaminant (ppm)									
Sample ID	Date	Filter #	Total Part.	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Nickel	Selenium	Zinc
Background Data												
TSP-001	6.03.03	7443102	67.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-002	6.03.03	7443103	47.9	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-003	6.03.03	7443104	43.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-004	6.04.03	7443105	17.7	ND	ND	ND	ND	ND	ND	ND	ND	0.254
TSP-005	6.04.03	7443106	14.8	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-006	6.04.03	7443107	8.64	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-007	6.06.03	7443112	35.1	ND	ND	ND	ND	ND	ND	ND	ND	0.133
TSP-008	6.05.03	7443110	49	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-009	6.05.03	7443109	29.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-010	6.05.03	7443111	53.9	ND	ND	ND	ND	0.137	ND	ND	ND	ND
TSP-011	6.09.03	7443113	46.8	ND	ND	ND	ND	0.312	ND	ND	ND	ND
TSP-012	6.09.03	7443115	23.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-013	6.09.03	7443114	34.8	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-014	6.10.03	7454292	30.9	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-015	6.10.03	7454291	15.1	ND	ND	ND	ND	0.642	ND	ND	ND	ND
TSP-016	6.10.03	7454293	31.8	ND	ND	ND	ND	ND	ND	ND	ND	0.15
TSP-017	6.11.03	7443116	14.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-018	6.11.03	7454294	28.8	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-019	6.16.03	7454296	69.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-020	6.16.03	7454297	146	ND	ND	ND	ND	ND	ND	ND	ND	0.297
TSP-021	6.18.03	7454202	67	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-022	6.18.03	7454201	44.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-023	6.24.03	7454206	130	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-024	6.24.03	7454208	46.3	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-025	6.24.03	7454207	70.3	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-026	6.25.03	7454210	42.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-027	6.25.03	7454211	63	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-028	6.25.03	7454209	96.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sample Data												
TSP-029	7.1.01		43.6	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-030	7.1.01		58.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-031	7.1.01		66.6	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-032	7.8.03		23.3	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Former Stanley Tool Facility
Perimeter Air Monitoring
Analytical Summary

Air Sample ID	Date	Filter #	Contaminant (ppm) Total Part.	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Nickel	Selenium	Zinc
TSP-033	7.8.03		22.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-034	7.8.03		12.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-035	7.15.03		44.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-036	7.15.03		31.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-037	7.15.03		59.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-038	7.22.03		62.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-039	7.22.03		57.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-040	7.22.03		102.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSP-041	8.07.03		28.1	ND	N/A	N/A	ND	N/A	ND	N/A	N/A	N/A
TSP-042	8.07.03		51.6	ND	N/A	N/A	ND	N/A	ND	N/A	N/A	N/A
TSP-043	8.07.03		128.0	ND	N/A	N/A	ND	N/A	ND	N/A	N/A	N/A
TSP-044	8.14.03		81.9	ND	N/A	N/A	ND	N/A	ND	N/A	N/A	N/A
TSP-045	8.14.03		48.5	ND	N/A	N/A	ND	N/A	ND	N/A	N/A	N/A
TSP-046	8.14.03		66.4	ND	N/A	N/A	ND	N/A	ND	N/A	N/A	N/A
TSP-047	8.14.03		70.6	ND	N/A	N/A	ND	N/A	ND	N/A	N/A	N/A
TSP-048	8.14.03		52.9	ND	N/A	N/A	ND	N/A	ND	N/A	N/A	N/A
TSP-049	8.21.03		63.2	ND	N/A	N/A	ND	N/A	ND	N/A	N/A	N/A
TSP-050	8.27.03		121.0	ND	N/A	N/A	ND	N/A	ND	N/A	N/A	N/A
TSP-051	8.27.03		60.3	ND	N/A	N/A	ND	N/A	ND	N/A	N/A	N/A
TSP-052	8.27.03		94.0	ND	N/A	N/A	ND	N/A	ND	N/A	N/A	N/A
TSP-053	9.03.03		84.0	ND	N/A	N/A	ND	N/A	ND	N/A	N/A	N/A
TSP-054	9.03.03		47.0	ND	N/A	N/A	ND	N/A	ND	N/A	N/A	N/A
TSP-055	9.03.03		29.4	ND	N/A	N/A	ND	N/A	ND	N/A	N/A	N/A

Table 5
Former Stanley Tool Facility
Manifest Log
Environmental Quality Company (EQ)

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
6/16/2003	9336944	34.95	34.95	TCE (F001)
	9336945	34.05	69	TCE (F001)
	9336946	33.26	102.26	TCE (F001)
	9336947	33.49	135.75	TCE (F001)
	9336948	30.99	166.74	TCE (F001)
	9336949	29.36	196.1	TCE (F001)
	9336950	34.46	230.56	TCE (F001)
	9336951	32.83	263.39	TCE (F001)
	9336952	32.72	296.11	TCE (F001)
	9336953	32.88	328.99	TCE (F001)
	9336955	33.96	362.95	TCE (F001)
	9336956	27.73	390.68	TCE (F001)
	9336957	33.63	424.31	TCE (F001)
	9336958	33.53	457.84	TCE (F001)
	9336959	33.28	491.12	TCE (F001)
	9336960	33.31	524.43	TCE (F001)
	9336961	30.12	554.55	TCE (F001)
	9336962	33.22	587.77	TCE (F001)
6/17/2003	9336963	33.28	621.05	TCE (F001)
	9336964	32.27	653.32	TCE (F001)
	9336965	27.56	680.88	TCE (F001)
	9336966	33.78	714.66	TCE (F001)
	9336967	32.73	747.39	TCE (F001)
	9336968	32.25	779.64	TCE (F001)
	9336969	31.64	811.28	TCE (F001)
	9336970	32.5	843.78	TCE (F001)
	9336971	33.86	877.64	TCE (F001)
	9336972	33.14	910.78	TCE (F001)
	9336973	32.52	943.3	TCE (F001)
	9336974	28.96	972.26	TCE (F001)
	9336975	33.19	1005.45	TCE (F001)
	9336976	34.01	1039.46	TCE (F001)
	9336977	34.73	1074.19	TCE (F001)
	9336978	33.49	1107.68	TCE (F001)
	9336979	33.25	1140.93	TCE (F001)
	9336980	34.53	1175.46	TCE (F001)
	9336982	30.91	1206.37	TCE (F001)
6/18/2003	9336981	34.57	1240.94	TCE (F001)
	9336983	32.79	1273.73	TCE (F001)
	9336984	33.24	1306.97	TCE (F001)
	9336985	34.17	1341.14	TCE (F001)
	9336986	33.55	1374.69	TCE (F001)

Table 5
Former Stanley Tool Facility
Manifest Log
Environmental Quality Company (EQ)

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	9336987	28.63	1403.32	TCE (F001)
	9336988	32.4	1435.72	TCE (F001)
	9336989	35.05	1470.77	TCE (F001)
	9336990	33.21	1503.98	TCE (F001)
	9336991	30.61	1534.59	TCE (F001)
	9336992	34.13	1568.72	TCE (F001)
	9336993	30.31	1599.03	TCE (F001)
	9336994	33.56	1632.59	TCE (F001)
	9336995	34.18	1666.77	TCE (F001)
	9336996	34.43	1701.2	TCE (F001)
	9336997	33.34	1734.54	TCE (F001)
	9336998	32.55	1767.09	TCE (F001)
	9336999	28.02	1795.11	TCE (F001)
6/19/2003	9336922	34.21	1829.32	TCE (F001)
	9336923	34.39	1863.71	TCE (F001)
	9336924	32.95	1896.66	TCE (F001)
	9336925	31.16	1927.82	TCE (F001)
	9336926	34.07	1961.89	TCE (F001)
	9336927	27.49	1989.38	TCE (F001)
	9336928	33.38	2022.76	TCE (F001)
	9336929	27.58	2050.34	TCE (F001)
	9336930	34.04	2084.38	TCE (F001)
	9336931	31.82	2116.2	TCE (F001)
	9336932	35.81	2152.01	TCE (F001)
	9336933	33.18	2185.19	TCE (F001)
	9336934	32.89	2218.08	TCE (F001)
	9336935	32.05	2250.13	TCE (F001)
	9336936	34.12	2284.25	TCE (F001)
	9336937	32.57	2316.82	TCE (F001)
	9336938	25.73	2342.55	TCE (F001)
	9337000	32.33	2374.88	TCE (F001)
6/23/2003	9336910	34.7	2409.58	TCE (F001)
	9336911	34	2443.58	TCE (F001)
	9336912	33.01	2476.59	TCE (F001)
	9336913	33.23	2509.82	TCE (F001)
	9336914	33.57	2543.39	TCE (F001)
	9336915	34.73	2578.12	TCE (F001)
	9336916	32.72	2610.84	TCE (F001)
	9336917	33.04	2643.88	TCE (F001)
	9336918	33.13	2677.01	TCE (F001)
	9336919	32.15	2709.16	TCE (F001)
	9336920	32.83	2741.99	TCE (F001)

Table 5
Former Stanley Tool Facility
Manifest Log
Environmental Quality Company (EQ)

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	9336921	33.68	2775.67	TCE (F001)
6/27/2003	9336902	36.28	2811.95	TCE (F001)
	9336903	31.6	2843.55	TCE (F001)
	9336904	34.28	2877.83	TCE (F001)
	9336905	33.7	2911.53	TCE (F001)
	9336906	31.51	2943.04	TCE (F001)
	9336907	31.34	2974.38	TCE (F001)
	9336908	33.32	3007.7	TCE (F001)
	9336909	30.88	3038.58	TCE (F001)
6/30/2003	9336797	33.84	3072.42	TCE (F001) > 10 UTS
	9336798	34.47	3106.89	TCE (F001) > 10 UTS
	9336799	32.1	3138.99	TCE (F001) > 10 UTS
	9336800	34.78	3173.77	TCE (F001) > 10 UTS
	9336801	34.51	3208.28	TCE (F001) > 10 UTS
	9336802	30.54	3238.82	TCE (F001) > 10 UTS
7/1/2003	9336896	34.52	3273.34	TCE (F001)
	9336897	34.53	3307.87	TCE (F001)
	9336898	34.2	3342.07	TCE (F001)
	9336899	32.67	3374.74	TCE (F001)
	9336900	33.84	3408.58	TCE (F001)
7/14/2003	9336792	32.32	3440.9	TCE (F001)
	9336793	32.62	3473.52	TCE (F001)
	9336794	34.14	3507.66	TCE (F001)
	9336795	33.87	3541.53	TCE (F001)
	9336796	34.72	3576.25	TCE (F001)
	9336887	34.38	3610.63	TCE (F001)
	9336888	34.48	3645.11	TCE (F001)
	9336889	35.14	3680.25	TCE (F001)
	9336890	34.8	3715.05	TCE (F001)
	9336891	32.83	3747.88	TCE (F001)
	9336892	32.7	3780.58	TCE (F001)
	9336893	32.12	3812.7	TCE (F001)
	9336894	35.87	3848.57	TCE (F001)
	9336895	32.65	3881.22	TCE (F001)
	9336901	34.76	3915.98	TCE (F001)
7/17/2003	9348194	32.91	3948.89	PCB
	9348195	32.13	3981.02	PCB
	9348196	28.89	4009.91	PCB
	9348197	29.98	4039.89	PCB
	9348198	33.66	4073.55	PCB
	9348199	33.1	4106.65	PCB
	9348200	30.02	4136.67	PCB

Table 5
Former Stanley Tool Facility
Manifest Log
Environmental Quality Company (EQ)

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	9348201	35.53	4172.2	PCB
	9348202	35.94	4208.14	PCB
7/22/2003	9336876	33.58	4241.72	TCE (F001)
	9336877	33.15	4274.87	TCE (F001)
	9336878	35.62	4310.49	TCE (F001)
	9336879	34	4344.49	TCE (F001)
	9336880	33.02	4377.51	TCE (F001)
	9336881	33.52	4411.03	TCE (F001)
	9336882	33.99	4445.02	TCE (F001)
	9336883	34.48	4479.5	TCE (F001)
	9336884	33.91	4513.41	TCE (F001)
	9336885	32.64	4546.05	TCE (F001)
7/23/2003	9336874	33.96	4580.01	TCE (F001)
	9336875	32.93	4612.94	TCE (F001)
	9336788	34.17	4647.11	TCE (F001)
8/1/2003	9349471	34.29	4681.4	PCB
	9349472	32.88	4714.28	PCB
	9349473	35.9	4750.18	PCB
	9349474	33.84	4784.02	PCB
	9349475	32.05	4816.07	PCB
	9349476	35.18	4851.25	PCB
	9349477	34.12	4885.37	PCB
	9349478	34.66	4920.03	PCB
	9349479	34.92	4954.95	PCB
8/4/2003	9349480	32.44	4987.39	PCB
	9349481	35.35	5022.74	PCB
	9349482	31.881	5054.621	PCB
	9349483	33.93	5088.551	PCB
	9349484	30.91	5119.461	PCB
	9349485	31.85	5151.311	PCB
	9349486	36.58	5187.891	PCB
	9349487	31.84	5219.731	PCB
	9349488	26.78	5246.511	PCB
	9349489	34.55	5281.061	PCB
	9349490	36.15	5317.211	PCB
	9349491	30.55	5347.761	PCB
	9349492	34.04	5381.801	PCB
	9349493	31.34	5413.141	PCB
	9349494	25.95	5439.091	PCB
	9349495	35.11	5474.201	PCB
	9349496	32.16	5506.361	PCB
	9349497	34.95	5541.311	PCB

Table 5
Former Stanley Tool Facility
Manifest Log
Environmental Quality Company (EQ)

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
8/5/2003	9349498	33.42	5574.731	PCB
	9349499	33.82	5608.551	PCB
	9349500	35.75	5644.301	PCB
	9351029	34.61	5678.911	PCB
	9351030	35.08	5713.991	PCB
	9351031	33.26	5747.251	PCB
	9351032	32.43	5779.681	PCB
	9351033	32.25	5811.931	PCB
	9351034	36.01	5847.941	PCB
	9351035	33.21	5881.151	PCB
	9351036	31.28	5912.431	PCB
	9351037	34.51	5946.941	PCB
	9351038	34.6	5981.541	PCB
	9351039	33.63	6015.171	PCB
	9351040	36.29	6051.461	PCB
	9351041	32.9	6084.361	PCB
	9351042	33.44	6117.801	PCB
	9351043	31.98	6149.781	PCB
	9351044	33.24	6183.021	PCB
	9351045	31.96	6214.981	PCB
	9351046	36.23	6251.211	PCB
	9351047	31.91	6283.121	PCB
	9351048	29.9	6313.021	PCB
8/6/2003	9351049	33.55	6346.571	PCB
	9351050	32.48	6379.051	PCB
	9351051	29.98	6409.031	PCB
	9351052	32.16	6441.191	PCB
	9351053	35	6476.191	PCB
	9351054	32.99	6509.181	PCB
	9351055	31.56	6540.741	PCB
	9351056	31.08	6571.821	PCB
	9351057	32.26	6604.081	PCB
	9351058	32.19	6636.271	PCB
	9351059	31.49	6667.761	PCB
	9351060	33.93	6701.691	PCB
	9351061	34.1	6735.791	PCB
	9351062	38.4	6774.191	PCB
	9351063	34.04	6808.231	PCB
	9351064	30.45	6838.681	PCB
8/7/2003	9351065	26.3	6864.981	PCB
	9351066	31.95	6896.931	PCB
	9351067	30.58	6927.511	PCB

Table 5
Former Stanley Tool Facility
Manifest Log
Environmental Quality Company (EQ)

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	9351068	32.25	6959.761	PCB
	9351069	35.69	6995.451	PCB
	9351070	35.12	7030.571	PCB
	9351071	30.08	7060.651	PCB
	9351072	34.96	7095.611	PCB
	9351073	32.44	7128.051	PCB
	9351074	32.66	7160.711	PCB
	9351075	32.89	7193.601	PCB
8/13/2003	9351076	36.72	7230.321	PCB
	9351077	35.06	7265.381	PCB
	9351082	33.66	7299.041	PCB
	9351083	34.25	7333.291	PCB
	9351084	33.26	7366.551	PCB
	9351085	31.22	7397.771	PCB
	9351086	34.27	7432.041	PCB
	9351087	33.37	7465.411	PCB
	9351088	36.9	7502.311	PCB
	9351089	32.8	7535.111	PCB
	9351090	34.56	7569.671	PCB
	9351091	33.28	7602.951	PCB
	9351092	36.57	7639.521	PCB
	9351093	33.62	7673.141	PCB
	9351094	32.98	7706.121	PCB
	9351095	33.17	7739.291	PCB
	9351096	30.66	7769.951	PCB
	9351097	33.64	7803.591	PCB
8/14/2003	9351098	31.57	7835.161	PCB
	9351099	28.96	7864.121	PCB
	9351100	32.55	7896.671	PCB
	9351101	31.83	7928.501	PCB
	9351102	28.73	7957.231	PCB
	9351103	28.03	7985.261	PCB
	9351104	33.27	8018.531	PCB
	9351105	37.03	8055.561	PCB
	9351106	33.66	8089.221	PCB
	9351107	33.28	8122.501	PCB
	9351108	35.07	8157.571	PCB
	9351109	29.66	8187.231	PCB
	9351110	34.2	8221.431	PCB
	9351111	32.07	8253.501	PCB
	9351112	32.95	8286.451	PCB
	9351113	36.85	8323.301	PCB

Table 5
Former Stanley Tool Facility
Manifest Log
Environmental Quality Company (EQ)

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	9351114	32.42	8355.721	PCB
8/15/2003	9351115	34.72	8390.441	PCB
	9351116	30.85	8421.291	PCB
	9351117	34.41	8455.701	PCB
	9351118	34.89	8490.591	PCB
	9351119	31.67	8522.261	PCB
	9351120	33.33	8555.591	PCB
	9351121	29.56	8585.151	PCB
	9351122	30.62	8615.771	PCB
	9351123	34.93	8650.701	PCB
	9351124	34.43	8685.131	PCB
	9351125	34.17	8719.301	PCB
	9351459	33.2	8752.501	PCB
	9351460	35.62	8788.121	PCB
	9351461	32.34	8820.461	PCB
8/19/2003	9351462	32.83	8853.291	PCB
	9351463	34.14	8887.431	PCB
	9351464	33.38	8920.811	PCB
	9351465	33.31	8954.121	PCB
	9351466	32.18	8986.301	PCB
	9351467	31.31	9017.611	PCB
	9351468	35.05	9052.661	PCB
	9351469	34.58	9087.241	PCB
	9351470	35.6	9122.841	PCB
	9351471	34.32	9157.161	PCB
	9351472	33.53	9190.691	PCB
	9351473	34.19	9224.881	PCB
	9348535	31.47	9256.351	PCB
	9348536	32.89	9289.241	PCB
	9348537	34.17	9323.411	PCB
	9348538	33.53	9356.941	PCB
	9348539	33.19	9390.131	PCB
	9348540	33.81	9423.941	PCB
	9348541	34.08	9458.021	PCB
	9348542	32.54	9490.561	PCB
	9348543	34.66	9525.221	PCB
	9348544	34.59	9559.811	PCB
	9348545	32.51	9592.321	PCB
8/20/2003	9348546	33.03	9625.351	PCB
	9348547	37.24	9662.591	PCB
	9348548	33.12	9695.711	PCB
	9348549	34.47	9730.181	PCB

Table 5
Former Stanley Tool Facility
Manifest Log
Environmental Quality Company (EQ)

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	9348550	33.7	9763.881	PCB
	9348551	32.8	9796.681	PCB
	9348552	34.36	9831.041	PCB
	9348553	35.47	9866.511	PCB
	9348554	37.23	9903.741	PCB
	9348555	33.79	9937.531	PCB
	9348556	33.91	9971.441	PCB
	9348557	30.42	10001.861	PCB
9/22/2003	9330258	31.54	10033.401	TCE (F001)
	9330259	33.35	10066.751	TCE (F001)
	9330260	29.9	10096.651	TCE (F001)
	9348558	32.83	10129.481	South Area PCB1
	9348559	34.61	10164.091	South Area PCB1
	9348560	35.74	10199.831	South Area PCB1
	9348561	36.38	10236.211	South Area PCB1
Miscellaneous Waste Streams				
9/22/2003	9330278	NA	4 Drums	(EQ) PCB
12/27/2003	9436660	NA	7 Drums	(Dynecol) TCE (F001)

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
7/7/2003	156568	58.56	58.56	Special Waste Soil
	156855	69.52	128.08	Special Waste Soil
	156858	66.47	194.55	Special Waste Soil
	156859	63.81	258.36	Special Waste Soil
	156860	65.2	323.56	Special Waste Soil
	156861	64.04	387.60	Special Waste Soil
	156862	67.74	455.34	Special Waste Soil
	156863	58.28	513.62	Special Waste Soil
	156864	59.03	572.65	Special Waste Soil
	156865	58.34	630.99	Special Waste Soil
	156866	59.31	690.30	Special Waste Soil
	156867	58.72	749.02	Special Waste Soil
	156868	64.06	813.08	Special Waste Soil
7/8/2003	156844	52.84	865.92	Special Waste Soil
	156845	42.42	908.34	Special Waste Soil
	156846	38.44	946.78	Special Waste Soil
	156847	54.35	1001.13	Special Waste Soil
	156848	58.03	1059.16	Special Waste Soil
	156849	60.61	1119.77	Special Waste Soil
	156850	60.43	1180.20	Special Waste Soil
	156851	60.72	1240.92	Special Waste Soil
	156852	67.33	1308.25	Special Waste Soil
	156853	71.16	1379.41	Special Waste Soil
	156854	66.67	1446.08	Special Waste Soil
	156856	65.15	1511.23	Special Waste Soil
	156857	66.59	1577.82	Special Waste Soil
7/9/2003	156830	63.58	1641.40	Special Waste Soil
	156831	53.91	1695.31	Special Waste Soil
	156832	59.52	1754.83	Special Waste Soil
	156833	64.25	1819.08	Special Waste Soil
	156834	53.97	1873.05	Special Waste Soil
	156835	60.53	1933.58	Special Waste Soil
	156836	58.66	1992.24	Special Waste Soil
	156837	61.55	2053.79	Special Waste Soil
	156838	57.08	2110.87	Special Waste Soil
	156839	65.18	2176.05	Special Waste Soil
	156840	43.68	2219.73	Special Waste Soil
	156841	50.2	2269.93	Special Waste Soil
	156842	53.03	2322.96	Special Waste Soil
	156843	51.16	2374.12	Special Waste Soil
7/10/2003	156817	69.56	2443.68	Special Waste Soil
	156818	58.41	2502.09	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	156819	62.21	2564.30	Special Waste Soil
	156820	56.44	2620.74	Special Waste Soil
	156821	60.59	2681.33	Special Waste Soil
	156822	65.6	2746.93	Special Waste Soil
	156823	64.27	2811.20	Special Waste Soil
	156824	59.54	2870.74	Special Waste Soil
	156825	62.87	2933.61	Special Waste Soil
	156826	64.16	2997.77	Special Waste Soil
	156827	67.24	3065.01	Special Waste Soil
	156828	60.5	3125.51	Special Waste Soil
	156829	60.47	3185.98	Special Waste Soil
7/18/2003	156785	54.98	3240.96	Special Waste Soil
	156786	52.89	3293.85	Special Waste Soil
	156787	65.45	3359.30	Special Waste Soil
	156788	53.88	3413.18	Special Waste Soil
	156789	59.32	3472.50	Special Waste Soil
	156790	57.83	3530.33	Special Waste Soil
	156791	50.75	3581.08	Special Waste Soil
	156793	57.56	3638.64	Special Waste Soil
	156797	56.46	3695.10	Special Waste Soil
	156798	60.14	3755.24	Special Waste Soil
	156799	54.83	3810.07	Special Waste Soil
	156800	51.13	3861.20	Special Waste Soil
	156801	52.5	3913.70	Special Waste Soil
	156802	43.82	3957.52	Special Waste Soil
	156803	53.87	4011.39	Special Waste Soil
	156804	48.93	4060.32	Special Waste Soil
	156805	52.9	4113.22	Special Waste Soil
	156806	64.22	4177.44	Special Waste Soil
	156807	61.74	4239.18	Special Waste Soil
	156808	56.17	4295.35	Special Waste Soil
	156809	64.05	4359.40	Special Waste Soil
	156810	60.43	4419.83	Special Waste Soil
	156811	60.6	4480.43	Special Waste Soil
	156812	63.13	4543.56	Special Waste Soil
	156813	68.5	4612.06	Special Waste Soil
	156814	61.04	4673.10	Special Waste Soil
	156815	58.18	4731.28	Special Waste Soil
	156816	65.51	4796.79	Special Waste Soil
7/21/2003	156769	55.55	4852.34	Special Waste Soil
	156772	57.89	4910.23	Special Waste Soil
	156778	47.11	4957.34	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	156779	55.2	5012.54	Special Waste Soil
	156780	56.44	5068.98	Special Waste Soil
	156781	56.09	5125.07	Special Waste Soil
	156782	55	5180.07	Special Waste Soil
	156783	53.1	5233.17	Special Waste Soil
	156784	53.35	5286.52	Special Waste Soil
	156792	52.49	5339.01	Special Waste Soil
	156794	50.06	5389.07	Special Waste Soil
	156795	46.6	5435.67	Special Waste Soil
	156796	55.37	5491.04	Special Waste Soil
7/22/2003	156768	56.15	5547.19	Special Waste Soil
	156770	53.42	5600.61	Special Waste Soil
	156771	48.47	5649.08	Special Waste Soil
	156773	62.55	5711.63	Special Waste Soil
	156774	62.81	5774.44	Special Waste Soil
	156775	54.04	5828.48	Special Waste Soil
	156776	53.32	5881.80	Special Waste Soil
	156777	56.36	5938.16	Special Waste Soil
7/23/2003	156735	52.37	5990.53	Special Waste Soil
	156736	50.22	6040.75	Special Waste Soil
	156737	54.77	6095.52	Special Waste Soil
	156738	56.64	6152.16	Special Waste Soil
	156739	51.47	6203.63	Special Waste Soil
	156740	54.58	6258.21	Special Waste Soil
	156741	56.82	6315.03	Special Waste Soil
	156742	56.3	6371.33	Special Waste Soil
	156743	60.88	6432.21	Special Waste Soil
	156744	43.29	6475.50	Special Waste Soil
	156745	44.66	6520.16	Special Waste Soil
	156746	43.86	6564.02	Special Waste Soil
	156747	37.44	6601.46	Special Waste Soil
	156748	41.07	6642.53	Special Waste Soil
	156749	41.87	6684.40	Special Waste Soil
	156750	41.59	6725.99	Special Waste Soil
	156751	36.5	6762.49	Special Waste Soil
	156752	42.95	6805.44	Special Waste Soil
	156753	46.23	6851.67	Special Waste Soil
	156754	40	6891.67	Special Waste Soil
	156755	58.46	6950.13	Special Waste Soil
	156756	65.77	7015.90	Special Waste Soil
	156757	55.45	7071.35	Special Waste Soil
	156758	61.06	7132.41	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	156759	61.96	7194.37	Special Waste Soil
	156760	56.39	7250.76	Special Waste Soil
	156761	61.43	7312.19	Special Waste Soil
	156762	61.94	7374.13	Special Waste Soil
	156763	58.79	7432.92	Special Waste Soil
	156764	52.31	7485.23	Special Waste Soil
	156765	54.29	7539.52	Special Waste Soil
	156766	54.36	7593.88	Special Waste Soil
	156767	53.46	7647.34	Special Waste Soil
7/24/2003	156702	52.53	7699.87	Special Waste Soil
	156703	56.76	7756.63	Special Waste Soil
	156714	56.9	7813.53	Special Waste Soil
	156715	59.99	7873.52	Special Waste Soil
	156716	63.64	7937.16	Special Waste Soil
	156717	55.93	7993.09	Special Waste Soil
	156718	49.44	8042.53	Special Waste Soil
	156719	54.52	8097.05	Special Waste Soil
	156720	53.61	8150.66	Special Waste Soil
	156721	48.96	8199.62	Special Waste Soil
	156722	53.93	8253.55	Special Waste Soil
	156723	51.67	8305.22	Special Waste Soil
	156724	54.6	8359.82	Special Waste Soil
	156725	57.95	8417.77	Special Waste Soil
	156726	53.67	8471.44	Special Waste Soil
	156727	45.14	8516.58	Special Waste Soil
	156728	45.39	8561.97	Special Waste Soil
	156729	55.62	8617.59	Special Waste Soil
	156730	59.72	8677.31	Special Waste Soil
	156731	58.5	8735.81	Special Waste Soil
	156732	58.07	8793.88	Special Waste Soil
	156733	67.26	8861.14	Special Waste Soil
	156734	72.6	8933.74	Special Waste Soil
7/25/2003	156684		8933.74	Special Waste Soil
	156685	47.44	8981.18	Special Waste Soil
	156686	44.07	9025.25	Special Waste Soil
	156687	46.37	9071.62	Special Waste Soil
	156688	50.06	9121.68	Special Waste Soil
	156689	48.35	9170.03	Special Waste Soil
	156690	49.76	9219.79	Special Waste Soil
	156691	45.47	9265.26	Special Waste Soil
	156692	53.15	9318.41	Special Waste Soil
	156693	43.44	9361.85	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	156694	38.71	9400.56	Special Waste Soil
	156695	45.99	9446.55	Special Waste Soil
	156696	51.07	9497.62	Special Waste Soil
	156697	52.2	9549.82	Special Waste Soil
	156698	48.83	9598.65	Special Waste Soil
	156699	45.42	9644.07	Special Waste Soil
	156700	46.37	9690.44	Special Waste Soil
	156701	53.42	9743.86	Special Waste Soil
	156704	54.27	9798.13	Special Waste Soil
	156705	53.26	9851.39	Special Waste Soil
	156706	53.23	9904.62	Special Waste Soil
	156707	49.36	9953.98	Special Waste Soil
	156708	52.06	10006.04	Special Waste Soil
	156709	52.06	10058.10	Special Waste Soil
	156710	55.74	10113.84	Special Waste Soil
	156711	45.11	10158.95	Special Waste Soil
	156712	49.09	10208.04	Special Waste Soil
	156713	57.84	10265.88	Special Waste Soil
7/28/2003	156658	49.58	10315.46	Special Waste Soil
	156689	51.96	10367.42	Special Waste Soil
	156660	47.47	10414.89	Special Waste Soil
	156661	54.32	10469.21	Special Waste Soil
	156662	49.6	10518.81	Special Waste Soil
	156663	43.38	10562.19	Special Waste Soil
	156664	59.73	10621.92	Special Waste Soil
	156665	49.92	10671.84	Special Waste Soil
	156666	61.06	10732.90	Special Waste Soil
	156667	52.57	10785.47	Special Waste Soil
	156668	51.4	10836.87	Special Waste Soil
	156669	51.4	10888.27	Special Waste Soil
	156670	54.49	10942.76	Special Waste Soil
	156671	47.78	10990.54	Special Waste Soil
	156672	51.05	11041.59	Special Waste Soil
	156673	52.88	11094.47	Special Waste Soil
	156674	53.51	11147.98	Special Waste Soil
	156675	47.85	11195.83	Special Waste Soil
	156676	50.47	11246.30	Special Waste Soil
	156677	50.58	11296.88	Special Waste Soil
	156678	49.44	11346.32	Special Waste Soil
	156679	56.95	11403.27	Special Waste Soil
	156680	51.22	11454.49	Special Waste Soil
	156681	50.06	11504.55	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	156682	51.08	11555.63	Special Waste Soil
	156683	59.18	11614.81	Special Waste Soil
7/29/2003	156631	45.8	11660.61	Special Waste Soil
	156632	46.11	11706.72	Special Waste Soil
	156633	44.1	11750.82	Special Waste Soil
	156634	51.78	11802.60	Special Waste Soil
	156635	55.19	11857.79	Special Waste Soil
	156636	46.07	11903.86	Special Waste Soil
	156637	50.41	11954.27	Special Waste Soil
	156638	42.55	11996.82	Special Waste Soil
	156639	40.19	12037.01	Special Waste Soil
	156640	45.75	12082.76	Special Waste Soil
	156641	44.78	12127.54	Special Waste Soil
	156642	46.09	12173.63	Special Waste Soil
	156643	48.74	12222.37	Special Waste Soil
	156644	51.95	12274.32	Special Waste Soil
	156645	47.51	12321.83	Special Waste Soil
	156646	45.9	12367.73	Special Waste Soil
	156647	50.99	12418.72	Special Waste Soil
	156648	53.2	12471.92	Special Waste Soil
	156649	53.77	12525.69	Special Waste Soil
	156650	46.7	12572.39	Special Waste Soil
	156651	51.26	12623.65	Special Waste Soil
	156652	53.28	12676.93	Special Waste Soil
	156653	49.61	12726.54	Special Waste Soil
	156654	49.71	12776.25	Special Waste Soil
	156655	46.13	12822.38	Special Waste Soil
	156656	47.27	12869.65	Special Waste Soil
	156657	43.08	12912.73	Special Waste Soil
7/30/2003	156606	59.78	12972.51	Special Waste Soil
	156607	52.51	13025.02	Special Waste Soil
	156608	50.07	13075.09	Special Waste Soil
	156609	48.33	13123.42	Special Waste Soil
	156610	49.81	13173.23	Special Waste Soil
	156611	46.39	13219.62	Special Waste Soil
	156612	44.66	13264.28	Special Waste Soil
	156613	43.74	13308.02	Special Waste Soil
	156614	47.63	13355.65	Special Waste Soil
	156615	50.77	13406.42	Special Waste Soil
	156616	53.32	13459.74	Special Waste Soil
	156617	49.21	13508.95	Special Waste Soil
	156618	41.3	13550.25	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	156619	54.25	13604.50	Special Waste Soil
	156620	54.56	13659.06	Special Waste Soil
	156621	52.23	13711.29	Special Waste Soil
	156622	51.38	13762.67	Special Waste Soil
	156623	53.1	13815.77	Special Waste Soil
	156624	42.9	13858.67	Special Waste Soil
	156625	51.52	13910.19	Special Waste Soil
	156626	49.39	13959.58	Special Waste Soil
	156627	50.9	14010.48	Special Waste Soil
	156628	47.52	14058.00	Special Waste Soil
	156629	51.35	14109.35	Special Waste Soil
	156630	48.17	14157.52	Special Waste Soil
8/1/2003	156603	49.55	14207.07	Special Waste Soil
	156604	49.42	14256.49	Special Waste Soil
	156605	48.63	14305.12	Special Waste Soil
	156604	49.42	14354.54	Special Waste Soil
	156605	48.63	14403.17	Special Waste Soil
8/6/2003	156569	60.55	14463.72	Special Waste Soil
	156570	42.75	14506.47	Special Waste Soil
	156571	44	14550.47	Special Waste Soil
	156572	40.96	14591.43	Special Waste Soil
	156573	51.61	14643.04	Special Waste Soil
	156574	40.55	14683.59	Special Waste Soil
	156575	47.44	14731.03	Special Waste Soil
	156576	52.79	14783.82	Special Waste Soil
	156577	49.63	14833.45	Special Waste Soil
	156578	49.29	14882.74	Special Waste Soil
	156579	53.13	14935.87	Special Waste Soil
	156580	54.68	14990.55	Special Waste Soil
	156586	44.66	15035.21	Special Waste Soil
	156587	44.82	15080.03	Special Waste Soil
8/7/2003	156581	44.89	15124.92	Special Waste Soil
	156582	41.83	15166.75	Special Waste Soil
	156583	40.68	15207.43	Special Waste Soil
	156584	46.35	15253.78	Special Waste Soil
	156585	47.72	15301.50	Special Waste Soil
	156588	38.83	15340.33	Special Waste Soil
	156589	38.69	15379.02	Special Waste Soil
	156590	41.5	15420.52	Special Waste Soil
	156591	46.65	15467.17	Special Waste Soil
	156592	52.41	15519.58	Special Waste Soil
	156593	43.78	15563.36	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	156594	52.98	15616.34	Special Waste Soil
	156595	51.08	15667.42	Special Waste Soil
8/8/2003	156596	38.13	15705.55	Special Waste Soil
	156597	45.65	15751.20	Special Waste Soil
	156598	46.69	15797.89	Special Waste Soil
	156599	46.09	15843.98	Special Waste Soil
	156600	53.99	15897.97	Special Waste Soil
	156601	43.76	15941.73	Special Waste Soil
	156602	42.43	15984.16	Special Waste Soil
	160862	51	16035.16	Special Waste Soil
	160863	52.42	16087.58	Special Waste Soil
	160864	50.63	16138.21	Special Waste Soil
	160865	50.99	16189.20	Special Waste Soil
	160866	55.36	16244.56	Special Waste Soil
	160867	48.08	16292.64	Special Waste Soil
	160868	50.95	16343.59	Special Waste Soil
	160869	61.45	16405.04	Special Waste Soil
	160870	53.63	16458.67	Special Waste Soil
	160871	53.68	16512.35	Special Waste Soil
	160872	51.82	16564.17	Special Waste Soil
	160873	58.05	16622.22	Special Waste Soil
	160874	56.98	16679.20	Special Waste Soil
	160875	57.07	16736.27	Special Waste Soil
	160876	56.77	16793.04	Special Waste Soil
	160877	52.08	16845.12	Special Waste Soil
8/9/2003	160878	57.67	16902.79	Special Waste Soil
	160879	49.28	16952.07	Special Waste Soil
	160880	54.3	17006.37	Special Waste Soil
	160881	54.53	17060.90	Special Waste Soil
	160882	54.69	17115.59	Special Waste Soil
	160883	49.27	17164.86	Special Waste Soil
	160884	55.44	17220.30	Special Waste Soil
	160885	56.53	17276.83	Special Waste Soil
	160886	48.92	17325.75	Special Waste Soil
	160887	50.39	17376.14	Special Waste Soil
	160888	55.76	17431.90	Special Waste Soil
	160889	47.94	17479.84	Special Waste Soil
	160890	50.84	17530.68	Special Waste Soil
	160891	52.94	17583.62	Special Waste Soil
	160892	56.3	17639.92	Special Waste Soil
8/11/2003	160893	50.18	17690.10	Special Waste Soil
	160894	55.27	17745.37	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	160895	50.91	17796.28	Special Waste Soil
	160896	55.6	17851.88	Special Waste Soil
	160897	50.84	17902.72	Special Waste Soil
	160898	55.26	17957.98	Special Waste Soil
	160899	58.41	18016.39	Special Waste Soil
	160900	57.47	18073.86	Special Waste Soil
	160901	53.53	18127.39	Special Waste Soil
	160902	51.51	18178.90	Special Waste Soil
	160903	53.71	18232.61	Special Waste Soil
	160904	49.43	18282.04	Special Waste Soil
	160905	55.67	18337.71	Special Waste Soil
	160906	47.84	18385.55	Special Waste Soil
	160907	47.77	18433.32	Special Waste Soil
	160908	51.67	18484.99	Special Waste Soil
	160909	39.89	18524.88	Special Waste Soil
	160910	50.28	18575.16	Special Waste Soil
	160911	44	18619.16	Special Waste Soil
	160912	44.23	18663.39	Special Waste Soil
	160913	50.79	18714.18	Special Waste Soil
	160914	46.53	18760.71	Special Waste Soil
	160915	48.5	18809.21	Special Waste Soil
	160916	45.57	18854.78	Special Waste Soil
	160917	55.49	18910.27	Special Waste Soil
	160918	42.4	18952.67	Special Waste Soil
	160919	51.38	19004.05	Special Waste Soil
	160920	40.45	19044.50	Special Waste Soil
	160921	38.85	19083.35	Special Waste Soil
	160922	44.04	19127.39	Special Waste Soil
8/12/2003	160923	47.74	19175.13	Special Waste Soil
	160924	54.4	19229.53	Special Waste Soil
	160925	57.09	19286.62	Special Waste Soil
	160926	49.27	19335.89	Special Waste Soil
	160927	47.65	19383.54	Special Waste Soil
	160928	51.45	19434.99	Special Waste Soil
	160929	45.55	19480.54	Special Waste Soil
	160930	55.63	19536.17	Special Waste Soil
	160931	53.13	19589.30	Special Waste Soil
	160932	47.84	19637.14	Special Waste Soil
	160933	63.6	19700.74	Special Waste Soil
	160934	44.99	19745.73	Special Waste Soil
	160935	43.84	19789.57	Special Waste Soil
	160936	42.86	19832.43	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	160937	43.08	19875.51	Special Waste Soil
	160938	32.8	19908.31	Special Waste Soil
	160939	49.71	19958.02	Special Waste Soil
	160940	46.09	20004.11	Special Waste Soil
	160941	45.07	20049.18	Special Waste Soil
	160942	44.1	20093.28	Special Waste Soil
	160943	45.99	20139.27	Special Waste Soil
	160944	47.59	20186.86	Special Waste Soil
	160945	49.38	20236.24	Special Waste Soil
	160946	47.32	20283.56	Special Waste Soil
	160947	52.05	20335.61	Special Waste Soil
	160948	48.57	20384.18	Special Waste Soil
	160949	55.95	20440.13	Special Waste Soil
	160950	50.44	20490.57	Special Waste Soil
	160951	47.96	20538.53	Special Waste Soil
	160952	47.04	20585.57	Special Waste Soil
	160953	54.16	20639.73	Special Waste Soil
	160954	48.04	20687.77	Special Waste Soil
	160955	47.83	20735.60	Special Waste Soil
	160956	51.1	20786.70	Special Waste Soil
	160957	47.96	20834.66	Special Waste Soil
	160958	48.12	20882.78	Special Waste Soil
	160959	49.59	20932.37	Special Waste Soil
	160960	56.1	20988.47	Special Waste Soil
	160961	45.03	21033.50	Special Waste Soil
	160962	60.61	21094.11	Special Waste Soil
	160963	58.39	21152.50	Special Waste Soil
	160964	58.68	21211.18	Special Waste Soil
	160965	53.72	21264.90	Special Waste Soil
	160966	51.68	21316.58	Special Waste Soil
	160967	47.4	21363.98	Special Waste Soil
	160968	39.55	21403.53	Special Waste Soil
	160969	57.31	21460.84	Special Waste Soil
	160970	45.68	21506.52	Special Waste Soil
	160971	49.62	21556.14	Special Waste Soil
	160972	44.93	21601.07	Special Waste Soil
	160973	50.72	21651.79	Special Waste Soil
	160974	44.15	21695.94	Special Waste Soil
	160975	53.09	21749.03	Special Waste Soil
	160976	43.62	21792.65	Special Waste Soil
8/13/2003	160977	47.33	21839.98	Special Waste Soil
	160978	47.76	21887.74	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	160979	43.02	21930.76	Special Waste Soil
	160980	43.5	21974.26	Special Waste Soil
	160981	44.1	22018.36	Special Waste Soil
	160982	50.88	22069.24	Special Waste Soil
	160983	47.19	22116.43	Special Waste Soil
	160984	52.63	22169.06	Special Waste Soil
	160985	54.96	22224.02	Special Waste Soil
	160986	53.29	22277.31	Special Waste Soil
	160987	54.69	22332.00	Special Waste Soil
	160988	50.98	22382.98	Special Waste Soil
	160989	49.59	22432.57	Special Waste Soil
	160990	53.43	22486.00	Special Waste Soil
	160991	54.81	22540.81	Special Waste Soil
	160992	54.66	22595.47	Special Waste Soil
	160993	54.62	22650.09	Special Waste Soil
	160994	65.11	22715.20	Special Waste Soil
	160995	53.53	22768.73	Special Waste Soil
	160996	46.86	22815.59	Special Waste Soil
	160997	55.47	22871.06	Special Waste Soil
	160998	54.59	22925.65	Special Waste Soil
	161000	55.73	22981.38	Special Waste Soil
	161001	55.03	23036.41	Special Waste Soil
	161002	44.96	23081.37	Special Waste Soil
	161003	50.41	23131.78	Special Waste Soil
	161004	48.12	23179.90	Special Waste Soil
	161005	47.42	23227.32	Special Waste Soil
	161006	47.2	23274.52	Special Waste Soil
	161007	43.1	23317.62	Special Waste Soil
	161008	45.98	23363.60	Special Waste Soil
	161009	50.11	23413.71	Special Waste Soil
	161010	45.71	23459.42	Special Waste Soil
	161011	47.67	23507.09	Special Waste Soil
	161012	51.82	23558.91	Special Waste Soil
	161013	45.07	23603.98	Special Waste Soil
	161014	45.11	23649.09	Special Waste Soil
	161015	50.37	23699.46	Special Waste Soil
	161016	49.06	23748.52	Special Waste Soil
	161081	47.17	23795.69	Special Waste Soil
8/14/2003	161017	46.22	23841.91	Special Waste Soil
	161018	48.65	23890.56	Special Waste Soil
	161019	51.32	23941.88	Special Waste Soil
	161020	46.42	23988.30	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	161021	45.08	24033.38	Special Waste Soil
	161022	44.77	24078.15	Special Waste Soil
	161023	42.31	24120.46	Special Waste Soil
	161024	40.37	24160.83	Special Waste Soil
	161025	44.49	24205.32	Special Waste Soil
	161026	43.27	24248.59	Special Waste Soil
	161027	48.35	24296.94	Special Waste Soil
	161028	47.02	24343.96	Special Waste Soil
	161029	46.34	24390.30	Special Waste Soil
	161030	44.87	24435.17	Special Waste Soil
	161031	51	24486.17	Special Waste Soil
	161032	49.21	24535.38	Special Waste Soil
	161033	51.32	24586.70	Special Waste Soil
	161034	51.4	24638.10	Special Waste Soil
	161035	49.84	24687.94	Special Waste Soil
	161036	50.24	24738.18	Special Waste Soil
	161037	51.13	24789.31	Special Waste Soil
	161038	48.23	24837.54	Special Waste Soil
	161039	50.65	24888.19	Special Waste Soil
	161040	56.49	24944.68	Special Waste Soil
	161041	53.19	24997.87	Special Waste Soil
	161042	61.09	25058.96	Special Waste Soil
	161043	51.25	25110.21	Special Waste Soil
	161044	55.4	25165.61	Special Waste Soil
	161045	55.23	25220.84	Special Waste Soil
	161046	52.92	25273.76	Special Waste Soil
	161047	48.39	25322.15	Special Waste Soil
	161048	60.36	25382.51	Special Waste Soil
	161049	54.37	25436.88	Special Waste Soil
	161050	56.6	25493.48	Special Waste Soil
	161080	47.12	25540.60	Special Waste Soil
8/15/2003	161051	54.49	25595.09	Special Waste Soil
	161052	49.24	25644.33	Special Waste Soil
	161053	48.2	25692.53	Special Waste Soil
	161054	50.73	25743.26	Special Waste Soil
	161055	47.81	25791.07	Special Waste Soil
	161056	49.22	25840.29	Special Waste Soil
	161057	45.84	25886.13	Special Waste Soil
	161058	46.13	25932.26	Special Waste Soil
	161059	50.46	25982.72	Special Waste Soil
	161060	44.95	26027.67	Special Waste Soil
	161061	51.65	26079.32	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	161062	45.92	26125.24	Special Waste Soil
	161063	45.42	26170.66	Special Waste Soil
	161064	53.01	26223.67	Special Waste Soil
	161065	53.97	26277.64	Special Waste Soil
8/16/2003	161066	47.34	26324.98	Special Waste Soil
	161067	49.16	26374.14	Special Waste Soil
	161068	48.85	26422.99	Special Waste Soil
	161069	51.74	26474.73	Special Waste Soil
	161070	50	26524.73	Special Waste Soil
	161071	56.06	26580.79	Special Waste Soil
	161072	46.96	26627.75	Special Waste Soil
	161073	52.07	26679.82	Special Waste Soil
	161074	48.47	26728.29	Special Waste Soil
	161075	50.56	26778.85	Special Waste Soil
	161076	52.86	26831.71	Special Waste Soil
	161077	47.45	26879.16	Special Waste Soil
	161078	47.72	26926.88	Special Waste Soil
	161079	52.58	26979.46	Special Waste Soil
8/18/2003	161082	53.17	27032.63	Special Waste Soil
	161083	59.03	27091.66	Special Waste Soil
	161084	50.86	27142.52	Special Waste Soil
	161085	49.36	27191.88	Special Waste Soil
	161086	48.42	27240.30	Special Waste Soil
	161087	52.48	27292.78	Special Waste Soil
	161088	44.4	27337.18	Special Waste Soil
	161089	46.04	27383.22	Special Waste Soil
	161090	53.28	27436.50	Special Waste Soil
	161091	54.94	27491.44	Special Waste Soil
	161092	42.85	27534.29	Special Waste Soil
	161093	40.03	27574.32	Special Waste Soil
	161094	38.85	27613.17	Special Waste Soil
	161095	48.53	27661.70	Special Waste Soil
	161096	41.49	27703.19	Special Waste Soil
	161097	53.03	27756.22	Special Waste Soil
	161098	62.08	27818.30	Special Waste Soil
	161099	59.26	27877.56	Special Waste Soil
	161100	39.09	27916.65	Special Waste Soil
	161101	50.69	27967.34	Special Waste Soil
	161102	47.56	28014.90	Special Waste Soil
	161103	56.57	28071.47	Special Waste Soil
	161104	69.17	28140.64	Special Waste Soil
	161105	35.02	28175.66	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	161106	60.74	28236.40	Special Waste Soil
	161107	46.74	28283.14	Special Waste Soil
	161108	52.38	28335.52	Special Waste Soil
8/19/2003	161109	50.68	28386.20	Special Waste Soil
	161110	42.28	28428.48	Special Waste Soil
	161111	60.28	28488.76	Special Waste Soil
	161112	46.09	28534.85	Special Waste Soil
	161113	50.7	28585.55	Special Waste Soil
	161114	45.27	28630.82	Special Waste Soil
	161115	45.03	28675.85	Special Waste Soil
	161116	57.43	28733.28	Special Waste Soil
	161117	52.05	28785.33	Special Waste Soil
	161118	46.73	28832.06	Special Waste Soil
	161119	52.76	28884.82	Special Waste Soil
	161120	68.05	28952.87	Special Waste Soil
	161121	55.47	29008.34	Special Waste Soil
	161122	55.04	29063.38	Special Waste Soil
	161123	56.99	29120.37	Special Waste Soil
	161124	50.86	29171.23	Special Waste Soil
	161125	54.46	29225.69	Special Waste Soil
	161126	46.98	29272.67	Special Waste Soil
	161127	63.69	29336.36	Special Waste Soil
	161128	60.97	29397.33	Special Waste Soil
	161129	49.98	29447.31	Special Waste Soil
	161130	51.73	29499.04	Special Waste Soil
	161131	52.67	29551.71	Special Waste Soil
	161132	54.03	29605.74	Special Waste Soil
	161133	51.75	29657.49	Special Waste Soil
	161134	54.23	29711.72	Special Waste Soil
	161135	45.68	29757.40	Special Waste Soil
	161136	51.06	29808.46	Special Waste Soil
	161137	55.92	29864.38	Special Waste Soil
	161138	71.17	29935.55	Special Waste Soil
	161139	51.12	29986.67	Special Waste Soil
	161140	58.9	30045.57	Special Waste Soil
	161141	53.38	30098.95	Special Waste Soil
	161142	53.03	30151.98	Special Waste Soil
	161143	59.06	30211.04	Special Waste Soil
	161144	56.48	30267.52	Special Waste Soil
	161145	54.16	30321.68	Special Waste Soil
8/20/2003	161146	59.68	30381.36	Special Waste Soil
	161147	60	30441.36	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	161148	63.88	30505.24	Special Waste Soil
	161149	57.53	30562.77	Special Waste Soil
	161150	50.79	30613.56	Special Waste Soil
	161151	59.24	30672.80	Special Waste Soil
	161152	50.83	30723.63	Special Waste Soil
	161153	55.64	30779.27	Special Waste Soil
	161154	52.84	30832.11	Special Waste Soil
	161155	47.3	30879.41	Special Waste Soil
	161156	58.06	30937.47	Special Waste Soil
	161157	56.92	30994.39	Special Waste Soil
	161158	55.46	31049.85	Special Waste Soil
	161159	48.92	31098.77	Special Waste Soil
	161160	50.28	31149.05	Special Waste Soil
	161161	54.56	31203.61	Special Waste Soil
	161162	58.81	31262.42	Special Waste Soil
	161163	56.89	31319.31	Special Waste Soil
	161164	56.52	31375.83	Special Waste Soil
	161165	57.1	31432.93	Special Waste Soil
	161166	57.05	31489.98	Special Waste Soil
	161167	58.27	31548.25	Special Waste Soil
	161168	56.33	31604.58	Special Waste Soil
	161169	66.67	31671.25	Special Waste Soil
	161170	54.67	31725.92	Special Waste Soil
	161171	55.48	31781.40	Special Waste Soil
	161172	54.29	31835.69	Special Waste Soil
	161173	59.24	31894.93	Special Waste Soil
	161174	62.44	31957.37	Special Waste Soil
	161175	55.98	32013.35	Special Waste Soil
	161176	53.26	32066.61	Special Waste Soil
	161177	58.19	32124.80	Special Waste Soil
	161178	51.17	32175.97	Special Waste Soil
	161179	49.97	32225.94	Special Waste Soil
	161180	52.23	32278.17	Special Waste Soil
	161181	48.57	32326.74	Special Waste Soil
	161182	64.44	32391.18	Special Waste Soil
	161183	69.47	32460.65	Special Waste Soil
	161184	56.5	32517.15	Special Waste Soil
	161185	51.13	32568.28	Special Waste Soil
	161186	53.93	32622.21	Special Waste Soil
	161187	33.3	32655.51	Special Waste Soil
	161188	62.82	32718.33	Special Waste Soil
	161189	51.29	32769.62	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	161190	53	32822.62	Special Waste Soil
	161191	41.56	32864.18	Special Waste Soil
8/21/2003	161192	52.14	32916.32	Special Waste Soil
	161193	60.56	32976.88	Special Waste Soil
	161194	56.08	33032.96	Special Waste Soil
	161195	54.7	33087.66	Special Waste Soil
	161196	56.16	33143.82	Special Waste Soil
	161197	54.26	33198.08	Special Waste Soil
	161198	51.96	33250.04	Special Waste Soil
	161199	55.73	33305.77	Special Waste Soil
	161200	63	33368.77	Special Waste Soil
	161201	57.65	33426.42	Special Waste Soil
	161202	53.18	33479.60	Special Waste Soil
	161203	61.19	33540.79	Special Waste Soil
	161204	65.87	33606.66	Special Waste Soil
	161205	55.27	33661.93	Special Waste Soil
	161206	55.75	33717.68	Special Waste Soil
	161207	65.61	33783.29	Special Waste Soil
	161208	55.18	33838.47	Special Waste Soil
	161209	64.67	33903.14	Special Waste Soil
	161210	65.57	33968.71	Special Waste Soil
	161211	51.89	34020.60	Special Waste Soil
	161212	52.52	34073.12	Special Waste Soil
	161213	56.1	34129.22	Special Waste Soil
	161214	57.77	34186.99	Special Waste Soil
	161215	56.4	34243.39	Special Waste Soil
	161216	56.8	34300.19	Special Waste Soil
	161217	52.37	34352.56	Special Waste Soil
	161218	51.25	34403.81	Special Waste Soil
	161219	56.61	34460.42	Special Waste Soil
	161220	43.28	34503.70	Special Waste Soil
	161221	70.64	34574.34	Special Waste Soil
	161222	56.01	34630.35	Special Waste Soil
	161223	66.41	34696.76	Special Waste Soil
	161224	63.12	34759.88	Special Waste Soil
	161225	57.45	34817.33	Special Waste Soil
	161226	65.02	34882.35	Special Waste Soil
	161227	69.48	34951.83	Special Waste Soil
	161228	63.08	35014.91	Special Waste Soil
	161229	50.7	35065.61	Special Waste Soil
	161230	52.48	35118.09	Special Waste Soil
	161231	59.93	35178.02	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
8/22/2003	161232	57.03	35235.05	Special Waste Soil
	161233	43.89	35278.94	Special Waste Soil
	161234	55.16	35334.10	Special Waste Soil
	161235	48.9	35383.00	Special Waste Soil
	161236	44.47	35427.47	Special Waste Soil
	161237	43.71	35471.18	Special Waste Soil
	161238	41.79	35512.97	Special Waste Soil
	161239	42.58	35555.55	Special Waste Soil
	161240	48.39	35603.94	Special Waste Soil
	161241	55	35658.94	Special Waste Soil
	161242	51.08	35710.02	Special Waste Soil
	161243	49.74	35759.76	Special Waste Soil
	161244	56.63	35816.39	Special Waste Soil
	161245	53.08	35869.47	Special Waste Soil
	161246	32.6	35902.07	Special Waste Soil
	161247	50.06	35952.13	Special Waste Soil
	161248	49.95	36002.08	Special Waste Soil
	161249	52.82	36054.90	Special Waste Soil
	161250	67.7	36122.60	Special Waste Soil
	161251	48.98	36171.58	Special Waste Soil
	161252	53.93	36225.51	Special Waste Soil
	161253	49.67	36275.18	Special Waste Soil
	161254	47.07	36322.25	Special Waste Soil
	161255	54.26	36376.51	Special Waste Soil
	161256	54.31	36430.82	Special Waste Soil
	161257	53.1	36483.92	Special Waste Soil
	161258	49.42	36533.34	Special Waste Soil
	161259	56.34	36589.68	Special Waste Soil
	161260	46.77	36636.45	Special Waste Soil
	161261	77.44	36713.89	Special Waste Soil
	161262	46.85	36760.74	Special Waste Soil
	164343	49.45	36810.19	Special Waste Soil
	164344	44.51	36854.70	Special Waste Soil
	164345	67.96	36922.66	Special Waste Soil
	164346	39.05	36961.71	Special Waste Soil
	164347	51.83	37013.54	Special Waste Soil
	164348	50.78	37064.32	Special Waste Soil
	164349	55.88	37120.20	Special Waste Soil
	164350	52.44	37172.64	Special Waste Soil
	164351	53.85	37226.49	Special Waste Soil
	164352	51.7	37278.19	Special Waste Soil
	164353	54.45	37332.64	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	164354	54.56	37387.20	Special Waste Soil
	164355	45.32	37432.52	Special Waste Soil
8/23/2003	164356	52.05	37484.57	Special Waste Soil
	164357	55.76	37540.33	Special Waste Soil
	164358	56.93	37597.26	Special Waste Soil
	164359	52.07	37649.33	Special Waste Soil
	164360	48.59	37697.92	Special Waste Soil
	164361	50.35	37748.27	Special Waste Soil
	164362	45.32	37793.59	Special Waste Soil
	164363	51.78	37845.37	Special Waste Soil
	164364	47.67	37893.04	Special Waste Soil
	164365	54.95	37947.99	Special Waste Soil
	164366	51.81	37999.80	Special Waste Soil
	164367	52.23	38052.03	Special Waste Soil
	164368	52.05	38104.08	Special Waste Soil
	164369	55.01	38159.09	Special Waste Soil
	164370	48.21	38207.30	Special Waste Soil
	164371	47.25	38254.55	Special Waste Soil
	164372	51.99	38306.54	Special Waste Soil
	164373	53.23	38359.77	Special Waste Soil
	164374	64.76	38424.53	Special Waste Soil
	164375	54.02	38478.55	Special Waste Soil
	164376	59.43	38537.98	Special Waste Soil
	164377	58.35	38596.33	Special Waste Soil
	164378	50.98	38647.31	Special Waste Soil
	164379	54.8	38702.11	Special Waste Soil
	164380	50.37	38752.48	Special Waste Soil
	164381	53.03	38805.51	Special Waste Soil
	164382	55.55	38861.06	Special Waste Soil
	164383	52.79	38913.85	Special Waste Soil
	164384	51.43	38965.28	Special Waste Soil
	164385	53.37	39018.65	Special Waste Soil
	164386	50.14	39068.79	Special Waste Soil
	164387	46.46	39115.25	Special Waste Soil
	164388	46.64	39161.89	Special Waste Soil
	164389	51.22	39213.11	Special Waste Soil
	164390	55.05	39268.16	Special Waste Soil
	164391	55.87	39324.03	Special Waste Soil
	164392	52.63	39376.66	Special Waste Soil
	164393	35.77	39412.43	Special Waste Soil
	164394	54.6	39467.03	Special Waste Soil
	164395	40.34	39507.37	Special Waste Soil

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Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	164396	52.89	39560.26	Special Waste Soil
	164397	47.65	39607.91	Special Waste Soil
	164398	48.85	39656.76	Special Waste Soil
	164399	53.54	39710.30	Special Waste Soil
	164400	55.4	39765.70	Special Waste Soil
	164401	47.8	39813.50	Special Waste Soil
8/25/2003	164402	60.29	39873.79	Special Waste Soil
	164403	49.71	39923.50	Special Waste Soil
	164404	40.17	39963.67	Special Waste Soil
	164405	40.9	40004.57	Special Waste Soil
	164406	44.3	40048.87	Special Waste Soil
	164407	40.04	40088.91	Special Waste Soil
	164408	44.16	40133.07	Special Waste Soil
	164409	47.32	40180.39	Special Waste Soil
	164410	45.16	40225.55	Special Waste Soil
	164411	45.23	40270.78	Special Waste Soil
	164412	42.03	40312.81	Special Waste Soil
	164413	48.21	40361.02	Special Waste Soil
	164414	60.49	40421.51	Special Waste Soil
	164415	60.4	40481.91	Special Waste Soil
	164416	52.72	40534.63	Special Waste Soil
	164417	60.87	40595.50	Special Waste Soil
	164418	66.55	40662.05	Special Waste Soil
	164419	46.23	40708.28	Special Waste Soil
	164420	51.99	40760.27	Special Waste Soil
	164421	49.8	40810.07	Special Waste Soil
	164422	52.47	40862.54	Special Waste Soil
	164423	50.96	40913.50	Special Waste Soil
	164424	49.88	40963.38	Special Waste Soil
	164425	56.38	41019.76	Special Waste Soil
	164426	51.11	41070.87	Special Waste Soil
	164427	60.1	41130.97	Special Waste Soil
	164428	60.21	41191.18	Special Waste Soil
	164429	55.75	41246.93	Special Waste Soil
	164430	65.08	41312.01	Special Waste Soil
	164431	41.67	41353.68	Special Waste Soil
	164432	46.34	41400.02	Special Waste Soil
	164433	46.9	41446.92	Special Waste Soil
	164434	51.56	41498.48	Special Waste Soil
	164435	45.81	41544.29	Special Waste Soil
	164436	52.9	41597.19	Special Waste Soil
	164437	54.74	41651.93	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	164438	46.85	41698.78	Special Waste Soil
	164439	53.48	41752.26	Special Waste Soil
	164440	49.15	41801.41	Special Waste Soil
	164441	53.19	41854.60	Special Waste Soil
	164442	55.67	41910.27	Special Waste Soil
	164443	45.81	41956.08	Special Waste Soil
	164444	52.43	42008.51	Special Waste Soil
8/26/2003	164445	76.1	42084.61	Special Waste Soil
	164446	57.34	42141.95	Special Waste Soil
	164447	50.28	42192.23	Special Waste Soil
	164448	58.72	42250.95	Special Waste Soil
	164449	57.88	42308.83	Special Waste Soil
	164450	54.06	42362.89	Special Waste Soil
	164451	51.34	42414.23	Special Waste Soil
	164452	54.48	42468.71	Special Waste Soil
	164453	52.7	42521.41	Special Waste Soil
	164454	53.21	42574.62	Special Waste Soil
	164455	56.02	42630.64	Special Waste Soil
	164456	49.97	42680.61	Special Waste Soil
	164457	45.18	42725.79	Special Waste Soil
	164458	54.24	42780.03	Special Waste Soil
	164459	55.47	42835.50	Special Waste Soil
	164460	57.86	42893.36	Special Waste Soil
	164461	48.16	42941.52	Special Waste Soil
	164462	51.82	42993.34	Special Waste Soil
	164463	53.71	43047.05	Special Waste Soil
8/27/2003	164464	48.55	43095.60	Special Waste Soil
	164465	56.62	43152.22	Special Waste Soil
	164466	56.85	43209.07	Special Waste Soil
	164467	49.85	43258.92	Special Waste Soil
	164468	51.46	43310.38	Special Waste Soil
	164469	58.96	43369.34	Special Waste Soil
	164470	57.16	43426.50	Special Waste Soil
	164471	47.55	43474.05	Special Waste Soil
	164472	50.29	43524.34	Special Waste Soil
	164473	51.28	43575.62	Special Waste Soil
	164474	53.54	43629.16	Special Waste Soil
	164475	56.02	43685.18	Special Waste Soil
	164476	59.08	43744.26	Special Waste Soil
	164477	50.96	43795.22	Special Waste Soil
	164478	60.08	43855.30	Special Waste Soil
	164479	44.03	43899.33	Special Waste Soil

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Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	164480	40.7	43940.03	Special Waste Soil
	164481	55.79	43995.82	Special Waste Soil
	164482	48.49	44044.31	Special Waste Soil
	164483	48.86	44093.17	Special Waste Soil
	164484	51.93	44145.10	Special Waste Soil
	164485	46.47	44191.57	Special Waste Soil
	164486	50.69	44242.26	Special Waste Soil
	164487	56.37	44298.63	Special Waste Soil
	164488	60.73	44359.36	Special Waste Soil
	164489	51.66	44411.02	Special Waste Soil
	164490	42.57	44453.59	Special Waste Soil
	164491	46.57	44500.16	Special Waste Soil
	164492	61.47	44561.63	Special Waste Soil
	164493	54.84	44616.47	Special Waste Soil
	164494	57.22	44673.69	Special Waste Soil
	164495	62.38	44736.07	Special Waste Soil
	164496	61.91	44797.98	Special Waste Soil
	164497	56.07	44854.05	Special Waste Soil
	164498	64.85	44918.90	Special Waste Soil
	164499	58.38	44977.28	Special Waste Soil
	164500	71.15	45048.43	Special Waste Soil
	164501	59.87	45108.30	Special Waste Soil
	164502	47.72	45156.02	Special Waste Soil
	164503	57.08	45213.10	Special Waste Soil
	164504	40.11	45253.21	Special Waste Soil
	164505	49.95	45303.16	Special Waste Soil
	164506	48.76	45351.92	Special Waste Soil
	164507	46.4	45398.32	Special Waste Soil
	164508	40.46	45438.78	Special Waste Soil
	164509	47.68	45486.46	Special Waste Soil
	164510	50.94	45537.40	Special Waste Soil
	164511	53.81	45591.21	Special Waste Soil
	164512	59.07	45650.28	Special Waste Soil
8/28/2003	164513	58.27	45708.55	Special Waste Soil
	164514	48.76	45757.31	Special Waste Soil
	164515	50	45807.31	Special Waste Soil
	164516	62.86	45870.17	Special Waste Soil
	164517	65.83	45936.00	Special Waste Soil
	164518	55.13	45991.13	Special Waste Soil
	164519	52.03	46043.16	Special Waste Soil
	164520	52.42	46095.58	Special Waste Soil
	164521	55.15	46150.73	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	164522	50.58	46201.31	Special Waste Soil
	164523	55.34	46256.65	Special Waste Soil
	164524	50.96	46307.61	Special Waste Soil
	164525	45.28	46352.89	Special Waste Soil
	164526	51.78	46404.67	Special Waste Soil
	164527	51.17	46455.84	Special Waste Soil
	164528	66.8	46522.64	Special Waste Soil
	164529	56.03	46578.67	Special Waste Soil
	164530	59.06	46637.73	Special Waste Soil
	164531	52.07	46689.80	Special Waste Soil
	164532	50.99	46740.79	Special Waste Soil
	164533	53.99	46794.78	Special Waste Soil
	164534	52.92	46847.70	Special Waste Soil
	164535	53.76	46901.46	Special Waste Soil
	164536	50.14	46951.60	Special Waste Soil
	164537	53.62	47005.22	Special Waste Soil
	164538	46.28	47051.50	Special Waste Soil
	164539	40.6	47092.10	Special Waste Soil
	164540	35.63	47127.73	Special Waste Soil
	164541	41.83	47169.56	Special Waste Soil
	164542		47169.56	Special Waste Soil
	164543		47169.56	Special Waste Soil
	164544	42.01	47211.57	Special Waste Soil
	164545	0	47211.57	Special Waste Soil
	164546	48.45	47260.02	Special Waste Soil
	164547	42.9	47302.92	Special Waste Soil
	164548	42.29	47345.21	Special Waste Soil
	164549	45.66	47390.87	Special Waste Soil
	164550	45.19	47436.06	Special Waste Soil
	164551	42.53	47478.59	Special Waste Soil
	164552	40.83	47519.42	Special Waste Soil
8/29/2003	164553	40.76	47560.18	Special Waste Soil
	164554	53.86	47614.04	Special Waste Soil
	164555	44.25	47658.29	Special Waste Soil
	164556	42.28	47700.57	Special Waste Soil
	164557	44.47	47745.04	Special Waste Soil
	164558	45.85	47790.89	Special Waste Soil
	164559	44.64	47835.53	Special Waste Soil
	164560	53.96	47889.49	Special Waste Soil
	164561	41.31	47930.80	Special Waste Soil
	164562	48.19	47978.99	Special Waste Soil
	164563	53.5	48032.49	Special Waste Soil

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Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	164564	41.71	48074.20	Special Waste Soil
	164565	44.02	48118.22	Special Waste Soil
	164566	52.28	48170.50	Special Waste Soil
	164567	44.37	48214.87	Special Waste Soil
	164568	11.63	48226.50	Special Waste Soil
	164569	50.7	48277.20	Special Waste Soil
	164570	48.25	48325.45	Special Waste Soil
	164571	50.42	48375.87	Special Waste Soil
	164572	47.67	48423.54	Special Waste Soil
9/2/2003	164573	37.14	48460.68	Special Waste Soil
	164574	42.97	48503.65	Special Waste Soil
	164575	40.12	48543.77	Special Waste Soil
	164576	35.09	48578.86	Special Waste Soil
	164577	38.42	48617.28	Special Waste Soil
	164578	41.37	48658.65	Special Waste Soil
	164579	51.93	48710.58	Special Waste Soil
	164580	39.57	48750.15	Special Waste Soil
	164581	44.65	48794.80	Special Waste Soil
	164582	46.05	48840.85	Special Waste Soil
	164583	44.35	48885.20	Special Waste Soil
	164584	41.99	48927.19	Special Waste Soil
	164585	51	48978.19	Special Waste Soil
	164586	55.12	49033.31	Special Waste Soil
	164587	46.8	49080.11	Special Waste Soil
	164588	59.29	49139.40	Special Waste Soil
	164589	52.16	49191.56	Special Waste Soil
	164590	44.71	49236.27	Special Waste Soil
	164591	55.34	49291.61	Special Waste Soil
	164592	50.1	49341.71	Special Waste Soil
	164593	51.64	49393.35	Special Waste Soil
	164594	53.62	49446.97	Special Waste Soil
	164595	45.66	49492.63	Special Waste Soil
	164596	58.96	49551.59	Special Waste Soil
	164597	49.63	49601.22	Special Waste Soil
	164598	47.73	49648.95	Special Waste Soil
	164599	57.9	49706.85	Special Waste Soil
	164600	53.07	49759.92	Special Waste Soil
	164601	51.5	49811.42	Special Waste Soil
	164602	45.86	49857.28	Special Waste Soil
	164603	46.99	49904.27	Special Waste Soil
	164604	45.51	49949.78	Special Waste Soil
	164605	45.74	49995.52	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	164606	45.77	50041.29	Special Waste Soil
	164607	39.48	50080.77	Special Waste Soil
	164608	45.74	50126.51	Special Waste Soil
	164609	46.88	50173.39	Special Waste Soil
	164610	43.31	50216.70	Special Waste Soil
	164611	43.54	50260.24	Special Waste Soil
	164612	46.06	50306.30	Special Waste Soil
	164613	50.17	50356.47	Special Waste Soil
	164614	36.98	50393.45	Special Waste Soil
	164615	42.96	50436.41	Special Waste Soil
	164616	42.19	50478.60	Special Waste Soil
	164617	39.99	50518.59	Special Waste Soil
	164618	57.31	50575.90	Special Waste Soil
	164619	52.35	50628.25	Special Waste Soil
	164620	46	50674.25	Special Waste Soil
	164621	41.7	50715.95	Special Waste Soil
	164622	46.28	50762.23	Special Waste Soil
	164623	44.29	50806.52	Special Waste Soil
	164624	49.98	50856.50	Special Waste Soil
	164625	48.6	50905.10	Special Waste Soil
9/3/2003	164626	44.71	50949.81	Special Waste Soil
	164627	41.49	50991.30	Special Waste Soil
	164628	47.88	51039.18	Special Waste Soil
	164629	52.39	51091.57	Special Waste Soil
	164630	51.56	51143.13	Special Waste Soil
	164631	42.78	51185.91	Special Waste Soil
	164632	48.51	51234.42	Special Waste Soil
	164633	55.69	51290.11	Special Waste Soil
	164634	55.33	51345.44	Special Waste Soil
	164635	50.94	51396.38	Special Waste Soil
	164636	54.19	51450.57	Special Waste Soil
	164637	48.69	51499.26	Special Waste Soil
	164638	52.9	51552.16	Special Waste Soil
	164639	51.43	51603.59	Special Waste Soil
	164640	45.84	51649.43	Special Waste Soil
	164641	54.17	51703.60	Special Waste Soil
	164642	53.34	51756.94	Special Waste Soil
	164643	52.7	51809.64	Special Waste Soil
	165610	54.27	51863.91	Special Waste Soil
	165611	59.73	51923.64	Special Waste Soil
	165612	51.9	51975.54	Special Waste Soil
	165613	51.35	52026.89	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	165614	50.36	52077.25	Special Waste Soil
	165615	48.91	52126.16	Special Waste Soil
	165616	51.36	52177.52	Special Waste Soil
	165617	54.46	52231.98	Special Waste Soil
	165618	49.3	52281.28	Special Waste Soil
	165619	55.76	52337.04	Special Waste Soil
	165620	52.16	52389.20	Special Waste Soil
	165621	50.09	52439.29	Special Waste Soil
	165622	49.85	52489.14	Special Waste Soil
	165623	52.18	52541.32	Special Waste Soil
	165624	55.51	52596.83	Special Waste Soil
	165625	57.47	52654.30	Special Waste Soil
	165626	54.12	52708.42	Special Waste Soil
	165627	50.57	52758.99	Special Waste Soil
	165628	48.93	52807.92	Special Waste Soil
	165629	58.66	52866.58	Special Waste Soil
	165630	55.71	52922.29	Special Waste Soil
	165631	51.64	52973.93	Special Waste Soil
	165632	56.45	53030.38	Special Waste Soil
	165633	55.85	53086.23	Special Waste Soil
	165634	59.96	53146.19	Special Waste Soil
	165635	55.89	53202.08	Special Waste Soil
	165636	50.77	53252.85	Special Waste Soil
	165637	54.72	53307.57	Special Waste Soil
	165925	54.5	53362.07	Special Waste Soil
	165926	57.32	53419.39	Special Waste Soil
	165927	55.85	53475.24	Special Waste Soil
	165928	55.24	53530.48	Special Waste Soil
	165929	56.17	53586.65	Special Waste Soil
	165930	52.24	53638.89	Special Waste Soil
9/4/2003	155931	50.48	53689.37	Special Waste Soil
	155932	57.04	53746.41	Special Waste Soil
	155933	53.32	53799.73	Special Waste Soil
	155934	58.29	53858.02	Special Waste Soil
	155935	51.52	53909.54	Special Waste Soil
	155936	50.47	53960.01	Special Waste Soil
	155937	55.28	54015.29	Special Waste Soil
	155938	52.59	54067.88	Special Waste Soil
	155939	52.54	54120.42	Special Waste Soil
	155940	53.12	54173.54	Special Waste Soil
	155941	57.64	54231.18	Special Waste Soil
	155942	53.96	54285.14	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	155943	62.94	54348.08	Special Waste Soil
	155944	53.54	54401.62	Special Waste Soil
	155945	48.52	54450.14	Special Waste Soil
	155946	53.7	54503.84	Special Waste Soil
	155947	58.29	54562.13	Special Waste Soil
	155948	51.18	54613.31	Special Waste Soil
	155949	49.46	54662.77	Special Waste Soil
	155950	53.12	54715.89	Special Waste Soil
	155951	47.42	54763.31	Special Waste Soil
	155952	48.94	54812.25	Special Waste Soil
	155953	51.7	54863.95	Special Waste Soil
	155954	44.94	54908.89	Special Waste Soil
	155955	47.36	54956.25	Special Waste Soil
	155956	51.37	55007.62	Special Waste Soil
	155957	47.58	55055.20	Special Waste Soil
	155958	48	55103.20	Special Waste Soil
	155959	46.65	55149.85	Special Waste Soil
	155960	47.07	55196.92	Special Waste Soil
	155961	45.84	55242.76	Special Waste Soil
	155962	47.79	55290.55	Special Waste Soil
	155963	46.59	55337.14	Special Waste Soil
	155964	48.74	55385.88	Special Waste Soil
	155965	50.57	55436.45	Special Waste Soil
	155966	47.78	55484.23	Special Waste Soil
	155967	47.57	55531.80	Special Waste Soil
	155968	49.1	55580.90	Special Waste Soil
	155969	55.98	55636.88	Special Waste Soil
	155970	54.98	55691.86	Special Waste Soil
	155971	55.48	55747.34	Special Waste Soil
9/5/2003	165972	49.76	55797.10	Special Waste Soil
	165973	52.98	55850.08	Special Waste Soil
	165974	51.23	55901.31	Special Waste Soil
	165975	49.89	55951.20	Special Waste Soil
	165976	48.83	56000.03	Special Waste Soil
	165977	69.48	56069.51	Special Waste Soil
	165978	47.53	56117.04	Special Waste Soil
	165979	50.1	56167.14	Special Waste Soil
	165980	48.94	56216.08	Special Waste Soil
	165981	53	56269.08	Special Waste Soil
	165982	48.27	56317.35	Special Waste Soil
	165983	48.77	56366.12	Special Waste Soil
	165984	48.12	56414.24	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	165985	43.04	56457.28	Special Waste Soil
	165986	45.99	56503.27	Special Waste Soil
	165987	58.49	56561.76	Special Waste Soil
	165988	52.23	56613.99	Special Waste Soil
	165989	55.84	56669.83	Special Waste Soil
	165990	49.5	56719.33	Special Waste Soil
	165991	50.89	56770.22	Special Waste Soil
	165992	45.19	56815.41	Special Waste Soil
	165993	47.04	56862.45	Special Waste Soil
	165994	47.82	56910.27	Special Waste Soil
	165995	48.59	56958.86	Special Waste Soil
	165996	48.82	57007.68	Special Waste Soil
	165997	53.42	57061.10	Special Waste Soil
	165998	54.02	57115.12	Special Waste Soil
	165999	52.29	57167.41	Special Waste Soil
	166000	58.12	57225.53	Special Waste Soil
	166001	45.5	57271.03	Special Waste Soil
	166002	49.04	57320.07	Special Waste Soil
	166003	48.68	57368.75	Special Waste Soil
	166004	51.93	57420.68	Special Waste Soil
	166005	48.79	57469.47	Special Waste Soil
	166006	60.75	57530.22	Special Waste Soil
	166007	50.39	57580.61	Special Waste Soil
	166008	53.09	57633.70	Special Waste Soil
9/8/2003	166009	62.79	57696.49	Special Waste Soil
	166010	50.09	57746.58	Special Waste Soil
	166011	45.53	57792.11	Special Waste Soil
	166012	59.9	57852.01	Special Waste Soil
	166013	53.2	57905.21	Special Waste Soil
	166014	0	57905.21	Special Waste Debris
	166015	49.54	57954.75	Special Waste Soil
	166016	49.54	58004.29	Special Waste Soil
	166017	45.54	58049.83	Special Waste Soil
	166018	52.41	58102.24	Special Waste Soil
	166019	51.1	58153.34	Special Waste Soil
	166020	49.07	58202.41	Special Waste Soil
	166021	51.16	58253.57	Special Waste Soil
	166022	48.01	58301.58	Special Waste Soil
	166023	53.6	58355.18	Special Waste Soil
	166024	64.93	58420.11	Special Waste Soil
	166025	55.09	58475.20	Special Waste Soil
	166026	53.06	58528.26	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	166027	52.58	58580.84	Special Waste Soil
	166028	45.33	58626.17	Special Waste Soil
	166029	52.28	58678.45	Special Waste Soil
	166030	47.4	58725.85	Special Waste Soil
	166031	51.7	58777.55	Special Waste Soil
	166032	64.66	58842.21	Special Waste Soil
	166033	0	58842.21	Special Waste Debris
	166034	50.14	58892.35	Special Waste Soil
	166035	51.09	58943.44	Special Waste Soil
	166036	51.91	58995.35	Special Waste Soil
	166037	44.87	59040.22	Special Waste Soil
	166038	55.49	59095.71	Special Waste Soil
	166039	55.04	59150.75	Special Waste Soil
	166040	54.28	59205.03	Special Waste Soil
	166041	59.06	59264.09	Special Waste Soil
	166042	49.5	59313.59	Special Waste Soil
	166043	51.36	59364.95	Special Waste Soil
	166044	61.63	59426.58	Special Waste Soil
	166045	0	59426.58	Special Waste Debris
	166046	53.9	59480.48	Special Waste Soil
	166047	53.15	59533.63	Special Waste Soil
	166048	49.51	59583.14	Special Waste Soil
	166049	54.61	59637.75	Special Waste Soil
	166050	52.26	59690.01	Special Waste Soil
9/9/2003	166051	59.19	59749.20	Special Waste Soil
	166052	50.31	59799.51	Special Waste Soil
	166053	56.26	59855.77	Special Waste Soil
	166054	55.44	59911.21	Special Waste Soil
	166055	53.63	59964.84	Special Waste Soil
	166056	59.97	60024.81	Special Waste Soil
	166057	49.95	60074.76	Special Waste Soil
	166058	48.95	60123.71	Special Waste Soil
	166059	0	60123.71	Special Waste Debris
	166060	54.19	60177.90	Special Waste Soil
	166061	52.51	60230.41	Special Waste Soil
	166062	51.37	60281.78	Special Waste Soil
	166063	49.07	60330.85	Special Waste Soil
	166064	51.86	60382.71	Special Waste Soil
	166065	56.8	60439.51	Special Waste Soil
	166066	53.07	60492.58	Special Waste Soil
	166067	59.41	60551.99	Special Waste Soil
	166068	54.84	60606.83	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	166069	57.3	60664.13	Special Waste Soil
	166070	52.98	60717.11	Special Waste Soil
	166071	0	60717.11	Special Waste Debris
	166072	56.6	60773.71	Special Waste Soil
	166073	63.52	60837.23	Special Waste Soil
	166074	55.44	60892.67	Special Waste Soil
	166075	59.16	60951.83	Special Waste Soil
	166076	51.48	61003.31	Special Waste Soil
	166077	57.11	61060.42	Special Waste Soil
	166078	55.79	61116.21	Special Waste Soil
	166079	53.44	61169.65	Special Waste Soil
	166080	53.35	61223.00	Special Waste Soil
	166081	53.2	61276.20	Special Waste Soil
	166082	56.11	61332.31	Special Waste Soil
	166083	57.2	61389.51	Special Waste Soil
	166084	0	61389.51	Special Waste Debris
	166085	58.25	61447.76	Special Waste Soil
	166086	57.08	61504.84	Special Waste Soil
	166087	52.77	61557.61	Special Waste Soil
	166088	50.32	61607.93	Special Waste Soil
	166089	52.6	61660.53	Special Waste Soil
	166090	51.42	61711.95	Special Waste Soil
	166091	43.07	61755.02	Special Waste Soil
	166092	53.45	61808.47	Special Waste Soil
	166093	47.1	61855.57	Special Waste Soil
9/10/2003	166094	47.43	61903.00	Special Waste Soil
	166095	52.46	61955.46	Special Waste Soil
	166096	52.32	62007.78	Special Waste Soil
	166097	46.78	62054.56	Special Waste Soil
	166098	57.1	62111.66	Special Waste Soil
	166099	51.21	62162.87	Special Waste Soil
	166100	51.77	62214.64	Special Waste Soil
	166101	60.43	62275.07	Special Waste Soil
	166102	0	62275.07	Special Waste Debris
	166103	54.17	62329.24	Special Waste Soil
	166104	44.78	62374.02	Special Waste Soil
	166105	48.18	62422.20	Special Waste Soil
	166106	53.22	62475.42	Special Waste Soil
	166107	55.1	62530.52	Special Waste Soil
	166108	55.42	62585.94	Special Waste Soil
	166109	49.89	62635.83	Special Waste Soil
	166110	0	62635.83	Special Waste Debris

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	166113	46.43	62682.26	Special Waste Soil
	166114	52.55	62734.81	Special Waste Soil
	166115	49.82	62784.63	Special Waste Soil
	166116	55.8	62840.43	Special Waste Soil
	166117	58.37	62898.80	Special Waste Soil
	166118	50.33	62949.13	Special Waste Soil
	166119	51.02	63000.15	Special Waste Soil
	166120	50.69	63050.84	Special Waste Soil
	166121	45.39	63096.23	Special Waste Soil
	166122	46.51	63142.74	Special Waste Soil
	166123	53.38	63196.12	Special Waste Soil
	166124	49.11	63245.23	Special Waste Soil
	166125	45.75	63290.98	Special Waste Soil
	166126	48.04	63339.02	Special Waste Soil
	166127	51.15	63390.17	Special Waste Soil
	166128	58.1	63448.27	Special Waste Soil
	166129	0	63448.27	Special Waste Debris
	166130	51.05	63499.32	Special Waste Soil
	166131	54.97	63554.29	Special Waste Soil
	166132	48.42	63602.71	Special Waste Soil
	166133	48.13	63650.84	Special Waste Soil
	166134	46.97	63697.81	Special Waste Soil
	166135	51.61	63749.42	Special Waste Soil
	166136	46.9	63796.32	Special Waste Soil
	166137	50.15	63846.47	Special Waste Soil
	166138	50.81	63897.28	Special Waste Soil
	166139	0	63897.28	Special Waste Debris
9/11/2003	165638	45.54	63942.82	Special Waste Soil
	165639	44.95	63987.77	Special Waste Soil
	165640	49.89	64037.66	Special Waste Soil
	165641	56.65	64094.31	Special Waste Soil
	165642	53.95	64148.26	Special Waste Soil
	165643	47.52	64195.78	Special Waste Soil
	165644	49.17	64244.95	Special Waste Soil
	165645	48.52	64293.47	Special Waste Soil
	165646	49.35	64342.82	Special Waste Soil
	165647	53.75	64396.57	Special Waste Soil
	165648	47.57	64444.14	Special Waste Soil
	165649	50.4	64494.54	Special Waste Soil
	165650	52.64	64547.18	Special Waste Soil
	165651	46.67	64593.85	Special Waste Soil
	165652	47.19	64641.04	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	165653	54.33	64695.37	Special Waste Soil
	165654	48.26	64743.63	Special Waste Soil
	165655	54.78	64798.41	Special Waste Soil
	165656	46.67	64845.08	Special Waste Soil
	165657	50.59	64895.67	Special Waste Soil
	165658	49.83	64945.50	Special Waste Soil
	165659	51.44	64996.94	Special Waste Soil
	165660	52.55	65049.49	Special Waste Soil
	166139	0	65049.49	Special Waste Debris
	166140	51.12	65100.61	Special Waste Soil
	166141	59.36	65159.97	Special Waste Soil
	166142	56.33	65216.30	Special Waste Soil
	166143	51.96	65268.26	Special Waste Soil
	166144	45.82	65314.08	Special Waste Soil
	166145	52.15	65366.23	Special Waste Soil
	166146	49.09	65415.32	Special Waste Soil
	166147	67.94	65483.26	Special Waste Soil
	166148	48.9	65532.16	Special Waste Soil
	166149	46.4	65578.56	Special Waste Soil
	166150	0	65578.56	Special Waste Debris
	166151	52.54	65631.10	Special Waste Soil
	166152	44.11	65675.21	Special Waste Soil
	166153	49.58	65724.79	Special Waste Soil
	166154	44.63	65769.42	Special Waste Soil
	166155	51.66	65821.08	Special Waste Soil
	166156	50.51	65871.59	Special Waste Soil
	166157	50.72	65922.31	Special Waste Soil
	166158	53.43	65975.74	Special Waste Soil
	166159	52.89	66028.63	Special Waste Soil
	166160	47.58	66076.21	Special Waste Soil
	166161	51.41	66127.62	Special Waste Soil
	166162	55.17	66182.79	Special Waste Soil
	166163	49.93	66232.72	Special Waste Soil
	166164	47.36	66280.08	Special Waste Soil
	166165	46.88	66326.96	Special Waste Soil
	166166	46.18	66373.14	Special Waste Soil
	166167	47.62	66420.76	Special Waste Soil
	166168	47.53	66468.29	Special Waste Soil
9/12/2003	165661	45.49	66513.78	Special Waste Soil
	165662	53.07	66566.85	Special Waste Soil
	165663	58.88	66625.73	Special Waste Soil
	165664	58.25	66683.98	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	165665	55.45	66739.43	Special Waste Soil
	165666	61.18	66800.61	Special Waste Soil
	165667	51.76	66852.37	Special Waste Soil
	165668	58.77	66911.14	Special Waste Soil
	165669	49.05	66960.19	Special Waste Soil
	165670	53.8	67013.99	Special Waste Soil
	165671	56.19	67070.18	Special Waste Soil
	165672	54.96	67125.14	Special Waste Soil
	165673	68.84	67193.98	Special Waste Soil
	165674	58.1	67252.08	Special Waste Soil
	165675	50.22	67302.30	Special Waste Soil
	165676	54.6	67356.90	Special Waste Soil
	165677	58.06	67414.96	Special Waste Soil
	165678	52.5	67467.46	Special Waste Soil
	165679	53.71	67521.17	Special Waste Soil
	165680	67.3	67588.47	Special Waste Soil
	165681	55.55	67644.02	Special Waste Soil
	165682	57.04	67701.06	Special Waste Soil
	165683	58.42	67759.48	Special Waste Soil
	165684	49.54	67809.02	Special Waste Soil
	165685	53	67862.02	Special Waste Soil
	165686	45.8	67907.82	Special Waste Soil
	165687	50.94	67958.76	Special Waste Soil
	165688	54.55	68013.31	Special Waste Soil
	165689	51.94	68065.25	Special Waste Soil
	165690	57.12	68122.37	Special Waste Soil
	165691	66.57	68188.94	Special Waste Soil
	165692	56.26	68245.20	Special Waste Soil
	165693	50.58	68295.78	Special Waste Soil
	165694	51.05	68346.83	Special Waste Soil
	165695	54.08	68400.91	Special Waste Soil
	165696	50.96	68451.87	Special Waste Soil
	165697	53.62	68505.49	Special Waste Soil
	165698	53.28	68558.77	Special Waste Soil
9/15/2003	165699	60.48	68619.25	Special Waste Soil
	165700	62.63	68681.88	Special Waste Soil
	165701	48.78	68730.66	Special Waste Soil
	165702	48.48	68779.14	Special Waste Soil
	165703	49.2	68828.34	Special Waste Soil
	165704	49.44	68877.78	Special Waste Soil
	165705	62.27	68940.05	Special Waste Soil
	165706	54.3	68994.35	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	165707	52.94	69047.29	Special Waste Soil
	165708	54.43	69101.72	Special Waste Soil
	165709	52.69	69154.41	Special Waste Soil
	166591	50.4	69204.81	Special Waste Soil
	166592	61.02	69265.83	Special Waste Soil
	166593	49.3	69315.13	Special Waste Soil
	166594	59.45	69374.58	Special Waste Soil
	166595	49.01	69423.59	Special Waste Soil
9/16/2003	166596	47.43	69471.02	Special Waste Soil
	166597	49.31	69520.33	Special Waste Soil
	166598	53.45	69573.78	Special Waste Soil
	166599	55.35	69629.13	Special Waste Soil
	166600	64.9	69694.03	Special Waste Soil
	166601	53.82	69747.85	Special Waste Soil
	166602	66.57	69814.42	Special Waste Soil
	166603	54.37	69868.79	Special Waste Soil
9/17/2003	166604	53.67	69922.46	Special Waste Soil
	166605	65.93	69988.39	Special Waste Soil
	166606	55.47	70043.86	Special Waste Soil
	166607	61.7	70105.56	Special Waste Soil
	166608	57.25	70162.81	Special Waste Soil
	166609	57.18	70219.99	Special Waste Soil
10/1/2003	166611	57.68	70277.67	Special Waste Soil
	166612	59.43	70337.10	Special Waste Soil
	166613	59.11	70396.21	Special Waste Soil
	166614	64.6	70460.81	Special Waste Soil
	166615	61.46	70522.27	Special Waste Soil
	166616	62.3	70584.57	Special Waste Soil
10/2/2003	166617	46.16	70630.73	Special Waste Soil
	166618	41.38	70672.11	Special Waste Soil
10/3/2003	166619	47.97	70720.08	Special Waste Soil
	166620	41.79	70761.87	Special Waste Soil
	166621	41.45	70803.32	Special Waste Soil
	166622	46.86	70850.18	Special Waste Soil
	166623	43.15	70893.33	Special Waste Soil
10/17/2003	166633	44.8	70938.13	Special Waste Soil
	166634	52.41	70990.54	Special Waste Soil
	166635	50.31	71040.85	Special Waste Soil
	166637	50.21	71091.06	Special Waste Soil
	166638	52.39	71143.45	Special Waste Soil
	166639	45.65	71189.10	Special Waste Soil
	166640	51.85	71240.95	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	166641	43.41	71284.36	Special Waste Soil
	166642	41.44	71325.80	Special Waste Soil
10/18/2003	166625	42.63	71368.43	Special Waste Soil
	166626	42.1	71410.53	Special Waste Soil
	166627	49.49	71460.02	Special Waste Soil
	166628	47.81	71507.83	Special Waste Soil
	166629	65.54	71573.37	Special Waste Soil
	166630	51.12	71624.49	Special Waste Soil
	166631	46.84	71671.33	Special Waste Soil
10/20/2003	166624	57.63	71728.96	Special Waste Soil
	166648	46.67	71775.63	Special Waste Soil
	166649	62.15	71837.78	Special Waste Soil
	166650	51.19	71888.97	Special Waste Soil
	166651	51.35	71940.32	Special Waste Soil
	166652	56.79	71997.11	Special Waste Soil
	166653	56.89	72054.00	Special Waste Soil
10/21/2003	166654	51.51	72105.51	Special Waste Soil
	166655	47.16	72152.67	Special Waste Soil
	166656	56.06	72208.73	Special Waste Soil
	166657	57.26	72265.99	Special Waste Soil
	166658	48.45	72314.44	Special Waste Soil
	166659	56.54	72370.98	Special Waste Soil
	166660	52.68	72423.66	Special Waste Soil
	166661	50.58	72474.24	Special Waste Soil
	166662	60.88	72535.12	Special Waste Soil
	166663	46.76	72581.88	Special Waste Soil
	166664	46.39	72628.27	Special Waste Soil
	166665	45.1	72673.37	Special Waste Soil
	166666	46.76	72720.13	Special Waste Soil
	166667	48.08	72768.21	Special Waste Soil
	166668	52.37	72820.58	Special Waste Soil
	166669	51.32	72871.90	Special Waste Soil
	166670	56.69	72928.59	Special Waste Soil
10/22/2003	166671	59.88	72988.47	Special Waste Soil
	166672	56.05	73044.52	Special Waste Soil
	166673	48.73	73093.25	Special Waste Soil
	166674	59.65	73152.90	Special Waste Soil
	166675	48.6	73201.50	Special Waste Soil
	166676	48.42	73249.92	Special Waste Soil
	166677	54.85	73304.77	Special Waste Soil
	166678	47.3	73352.07	Special Waste Soil
	166679	50.71	73402.78	Special Waste Soil

Table 6
Former Stanley Tool Facility
Allied Waste (Saulk Trails)
Manifest Log

Date	Manifest #	Tons/Load	Accumulative Tons	Waste Stream
	166680	51.77	73454.55	Special Waste Soil
	166681	47.82	73502.37	Special Waste Soil
	166682	39.25	73541.62	Special Waste Soil
	166683	37.67	73579.29	Special Waste Soil

Note: Stumps were generated as part of the clearing and grubbing activities

A

Appendix A

Summary Reports of Verification Sampling of Excavation Areas

Summary of TCE Area A 2003 Field Activities
Former Stanley Tools Site
Fowlerville, Michigan

Prepared for:
Johnson Controls, Inc.

Prepared by:
Earth Tech – Weston
14 January 2004

The Earth Tech-Weston Project Team (ETW) has prepared this submittal on behalf of Johnson Controls, Inc. (JCI) to document the excavation and confirmation sampling of trichloroethene (TCE)–impacted soils formerly present near the eastern margin of the former Stanley Tools site (Site) in Fowlerville, Michigan. These soils were excavated in June 2003 and transported as listed hazardous waste to The Environmental Quality Company (EQ) disposal facility in Belleville, Michigan as part of the Interim Measures (IM) project associated with an Administrative Order on Consent (AOC, Docket No. RCRA-05-2003-0004) dated 20 December 2002.

Delineation and Excavation Activities

Historical analytical data indicated that TCE contamination was present on the Site just south of the intersection of Veterans Drive and Frank Street. Specifically, this area is defined by soil samples collected in 2000 from locations TCE3, TCE7, and TCE8. These samples contained TCE concentrations that exceeded the protective of Groundwater/Surface Water Interface (GSI) criterion. An April 2003 soil sample collected from test pit SS41 confirmed the presence of TCE in this area. This location includes Solid Waste Management Unit (SWMU) L, which is the area around a former 1,000 gallon No. 2 fuel oil underground storage tank.

Excavation activities were conducted in June 2003. The excavation dimensions were approximately 75 feet by 35 feet extended below the water table, which was 6.5 feet below ground surface (bgs). Soils excavated from the area were transported as listed hazardous waste to The EQ disposal facility in Belleville, Michigan.

Confirmation Sampling, Analytical Results, and Additional Excavation

Verification samples were only collected from the sidewalls since the floor of the excavation was covered with water. Using the Guidance Document Verification of Soil Remediation dated April 1994, Revision 1, six verification soil samples were required from the sidewalls. Samples TA1 through TA-6 were collected and analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), Michigan 10 metals (arsenic, barium, cadmium, chromium, copper, lead, mercury selenium, silver, and zinc), nickel, chromium VI, total cyanide, and polychlorinated biphenyls (PCBs).

A seventh sample was collected 22 July 2003 using a hand auger. This sample was collected from the middle of the eastern wall because the excavation's proximity to the fence restricted samples TA2 and TA6 to the reach of the excavator. This sample was also analyzed for VOCs, SVOCs, Michigan 10 metals, nickel, chromium VI, total cyanide, and PCBs.

The analytical results for the seven soil samples were compared to the protective of Groundwater/Surface Water Interface (GSI) criteria. This comparison showed that the chromium VI concentrations detected in samples TA1 (14 mg/kg) and TA2 (19 mg/kg) exceeded the protective of GSI criterion of 3.3 mg/kg. Both of these sample locations were located near the northeast corner of the excavation.

On 11 September 2003, additional soils were removed from the area that contained samples TA1 and TA2. After the additional soils were removed, two soil samples (TA8 and TA9) were collected and submitted for chromium VI analysis. The results of the analyses show that the sample collected along the fence line (TA8) still contains chromium VI (8.3 mg/kg) above the protective of GSI criterion (3.3 mg/kg).

Summary of TCE Area B 2003 Field Activities
Former Stanley Tools Site
Fowlerville, Michigan

Prepared for:
Johnson Controls, Inc.

Prepared by:
Earth Tech – Weston
14 January 2004

The Earth Tech-Weston Project Team (ETW) has prepared this submittal on behalf of Johnson Controls, Inc. (JCI) to document the excavation and confirmation sampling of trichloroethene (TCE)–impacted soils formerly present near the southern margin of the former Stanley Tools site (Site) in Fowlerville, Michigan. These soils were excavated in June 2003 and transported as listed hazardous waste to The Environmental Quality Company (EQ) disposal facility in Belleville, Michigan as part of the Interim Measures (IM) project associated with an Administrative Order on Consent (AOC, Docket No. RCRA-05-2003-0004) dated 20 December 2002.

Delineation and Excavation Activities

Historical analytical data indicated that TCE contamination was present under the former building near the southern property boundary. Specifically, this area is defined by soil samples collected in 2000 from locations TCE15 and TCE16. These samples contained TCE concentrations that exceeded the protective of Groundwater/Surface Water Interface (GSI) criterion. An April 2003 soil sample collected from test pit KK41 confirmed the presence of TCE in this area.

Excavation activities were conducted in June 2003. The excavation dimensions were approximately 120 feet by 40 feet extended below the water table, which was 7 feet below ground surface (bgs). Soils excavated from the area were transported as listed hazardous waste to The EQ disposal facility in Belleville, Michigan.

Confirmation Sampling, Analytical Results, and Additional Excavation

Verification samples were only collected from the sidewalls since the floor of the excavation was covered with water. Using the Guidance Document Verification of Soil Remediation dated April 1994, Revision 1, eight verification soil samples were required from the sidewalls. Nine verification samples (TB1 through TB9), however, were collected in a phased excavation and sampling of the area. The samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), Michigan 10 metals (arsenic, barium, cadmium, chromium, copper, lead, mercury selenium, silver, and zinc), nickel, chromium VI, total cyanide, and polychlorinated biphenyls (PCBs).

The analytical results for the nine soil samples were compared to the protective of Groundwater/Surface Water Interface (GSI) criteria. This comparison showed that the mercury concentration detected in sample TB1 (0.15 mg/kg) and the 1,2,4- trimethylbenzene concentration in sample TB9 (1.5 mg/kg) exceeded their respective protective of GSI criterion of 0.1 mg/kg and 0.57 mg/kg.

On 11 September 2003, additional soils were removed from the area that contained sample TB1. After the additional soils were removed, two soil samples (TB10 and TB11) were collected and submitted for mercury analysis. The results of the analyses show that mercury was not present in the samples above the protective of GSI criterion.

Additional excavation activities were also conducted to the boundaries of TCE Area B. An excavation connecting TCE Area B with TCE Area C (located due west) removed the area including sample TB9. Excavation activities south of the excavation related to the "TPH Area" removed confirmation samples TB3 and TB4. These additional excavation activities adjacent to the TCE Area B excavation removed confirmation samples except TB2, TB5 through TB8, TB10 and TB11.

Summary of TCE Area C 2003 Field Activities
Former Stanley Tools Site
Fowlerville, Michigan

Prepared for:
Johnson Controls, Inc.

Prepared by:
Earth Tech – Weston
14 January 2004

The Earth Tech-Weston Project Team (ETW) has prepared this submittal on behalf of Johnson Controls, Inc. (JCI) to document the excavation and confirmation sampling of trichloroethene (TCE)–impacted soils formerly present near the southern margin of the former Stanley Tools site (Site) in Fowlerville, Michigan. These soils were excavated in June and July 2003 and transported to The Environmental Quality Company (EQ) disposal facility in Belleville, Michigan as part of the Interim Measures (IM) project associated with an Administrative Order on Consent (AOC, Docket No. RCRA-05-2003-0004) dated 20 December 2002.

Delineation and Excavation Activities

Historical analytical data indicated that TCE contamination was present under the western portion of the former building formerly containing the chemical storage area. Specifically, this area is defined by a soil sample collected in 2000 from location TCE38 and an April 2003 soil sample collected from test pit GG41. These samples contained TCE concentrations that exceeded the protective of Groundwater/Surface Water Interface (GSI) criterion.

Excavation activities were conducted in June and July 2003. The excavation dimensions were approximately 40 feet by 50 feet extended below the water table, which was approximately 8 feet below ground surface (bgs). The western portion of the excavation was handled separately because polychlorinated biphenyls (PCBs) were detected in the soil samples collected at location FF41. Soil samples collected from 0 to 2 feet and 2 to 4 feet contained PCBs in concentrations above 50 mg/kg requiring these soils to be handled as both listed hazardous and PCB-containing. The remaining soils excavated from the area were handled as listed hazardous waste. Both types of soils were transported to The EQ disposal facility in Belleville, Michigan.

Confirmation Sampling, Analytical Results, and Additional Excavation

Verification samples were only collected from the sidewalls since the floor of the excavation was covered with water. Using the Guidance Document Verification of Soil Remediation dated April 1994, Revision 1, seven verification soil samples were required from the sidewalls. Seven verification samples (TC1 through TC7) were collected and analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), Michigan 10 metals (arsenic, barium, cadmium, chromium, copper, lead, mercury selenium, silver, and zinc), nickel, chromium VI, total cyanide, and PCBs.

An eighth soil sample (TC00-pipe) was also collected from below a pipe present in the eastern sidewall of the excavation. The soil below this pipe was stained and had a petroleum odor. The sample was analyzed for VOCs, SVOCs, Michigan 10 metals, nickel, chromium VI, total cyanide, and PCBs.

The analytical results for the eight soil samples were compared to the protective of Groundwater/Surface Water Interface (GSI) criteria. This comparison (summarized in the table below) showed that each either contained compounds that exceed the criteria or detection levels above the criteria.

Sample ID	Compounds Detected Above the Protective of GSI Criteria	Detection Level for Compound was Above the Protective of GSI Criteria
TC01	Nickel, Selenium, Cyanide	
TC02	Cyanide, Selenium	
TC03		Chromium VI
TC04	Ethylbenzene, Xylenes, naphthalene, 1,2,4-Trimethylbenzene, 1,3,4-Trimethylbenzene	
TC05	Cyanide, Cyanide	
TC06	Cyanide	
TC07	Cyanide, Copper, Selenium	
TC08	Vinyl Chloride, cis-1,2-Dichloroethene, 1,1,1-Trichloroethene, Trichloroethene, 1,2,4-Trichlorobenzene, naphthalene	
TC00-pipe	Cyanide, Nickel, 1,2,4-Trimethylbenzene, 1,3,4-Trimethylbenzene	

A saturated soil sample (FF41-sat) was collected from the base in the excavation and analyzed for PCBs. This sample was collected from the area where the soils were determined to be PCB-containing and was to document that the PCB-containing soils were properly remediated. The results of this sample (0.42 mg/kg) show that the PCBs were removed to a concentration below the cleanup criterion of 16 mg/kg.

Additional excavation activities were conducted in each direction from the TCE Area C excavation. These additional excavation activities were associated with the following work:

- Area between TCE Area B and TCE Area C was excavated because the presence of compounds that exceeded the protective of GSI criteria in samples TB09, TC00-pipe, and TC07. This area is referred to as the "BC Area".
- The area to the south was excavated to the property line as part of the "TPH Area" and later extended to the "South Drain" excavation.
- The western edge of the TCE Area C excavation was excavated as part of the "Cyanide Area" excavation, which became part of the "Kerosene Area" and "Metal Area" excavations.
- The northern boundary of TCE Area C was excavated as part of step out excavations completed to address metal concentrations that exceeded the protective of GSI criteria. The final excavation to the north was conducted as part of the overall mass excavation plan for the site.

The result of these additional excavations was that each of the confirmation soil samples collected from the TCE Area C sidewalls have been excavated and removed from the site. Information concerning the sidewall verification samples used to document the remedial activities at the site will be addressed in the excavation summaries identified above.

Summary of the Field Activities in the Area between TCE Areas B and C
Former Stanley Tools Site
Fowlerville, Michigan

Prepared for:
Johnson Controls, Inc.

Prepared by:
Earth Tech – Weston
14 January 2004

The Earth Tech-Weston Project Team (ETW) has prepared this submittal on behalf of Johnson Controls, Inc. (JCI) to document the excavation and confirmation sampling of the area excavated between Trichloroethene (TCE) Areas B and C at of the former Stanley Tools site (Site) in Fowlerville, Michigan. These soils were excavated in July 2003 and transported to The Environmental Quality Company (EQ) permitted PCB disposal facility in Belleville, Michigan as part of the Interim Measures (IM) project associated with an Administrative Order on Consent (AOC, Docket No. RCRA-05-2003-0004) dated 20 December 2002.

Delineation and Excavation Activities

During excavation activities at TCE Areas B and C, volatile organic compounds were identified in the sidewall facing the other excavation. Specifically, the area was identified by sidewall verification samples TC00-pipe and TB09. Cyanide, nickel, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene were detected in the soil sample TC00-pipe at concentrations above the protective of groundwater/surface water interface (GSI) criteria. Sample TB09 contained 1,2,4-Trimethylbenezene above the criterion.

Excavation activities were conducted in July 2003. Confirmation soil samples were only collected from the north and south sidewalls since the excavation extended east and west into the TCE Area B and TCE Area C excavations, respectively. The excavation removed the area where confirmation sample TC01 was collected. The excavation was approximately 60 feet long and extended below the water table, which was approximately 7 feet below ground surface (bgs). These soils were excavated and transported to The Environmental Quality Company (EQ) permitted PCB disposal facility in Belleville, Michigan .

Confirmation Sampling, Analytical Results, and Additional Excavation

Verification samples were only collected from the north and south sidewalls. The east and west sidewalls were composed of fill material used after TCE Areas B and C were excavated and the base of the excavation was covered with water. No samples were collected from either of these areas. Each sidewall was treated as a separate excavation in determining the number of sidewall verification soil samples were needed using the Guidance Document Verification of Soil Remediation dated April 1994, Revision 1. Four verification samples were required from each sidewall; however, a fifth sample was collected from the north sidewall because of its irregular shape. The verification samples (BC01 through BC09) were collected and analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), Michigan 10 metals (arsenic, barium, cadmium, chromium, copper, lead, mercury selenium, silver, and zinc), nickel, chromium VI, total cyanide, and polychlorinated biphenyls (PCBs).

Summary of the Field Activities in the Area between TCE Areas B and C
Former Stanley Tools Site
(Continued)

The analytical results for the nine soil samples and water sample were compared to the relevant GSI criteria. This comparison (summarized in the table below) showed that each either contained compounds that exceed the criteria or detection levels above the criteria.

Sample ID	Compounds Detected Above the GSI Criteria
BC01	Chromium VI
BC02	Cyanide
BC03	Cyanide, Nickel
BC04	Cyanide, Nickel
BC05	Cyanide, Nickel
BC06	Cyanide
BC07	1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Cyanide
BC08	Cyanide
BC09	Cyanide, Copper

Additional excavation activities were conducted in north and south of the Area between TCE Areas B and C excavation. The excavation south to the property line was conducted as part of the "TPH Area" excavation. Samples BC10 through BC13 were collected at this time and will be discussed in the TPH Area Excavation write-up.

The additional excavation to the north was completed in two stages. The first stage extended the excavation approximately 7 feet to the north. This excavation removed the areas where verification sidewall samples BC01 through BC05, TC02, and TD01 were located. After the excavation was complete, five verification samples (BC14 through BC18) were collected from the north sidewall and analyzed for Michigan 10 Metals, nickel, and cyanide. Samples were not collected from the base of the excavation because the excavation extended into the water table. The results of these analyses were compared to the protective of GSI criteria, which showed that the criteria were exceeded in three of the five samples (see table below).

Sample ID	Compounds Detected Above the GSI Criteria
BC15	Nickel
BC16	Nickel
BC18	Nickel, Selenium

The excavation was then extended again to the north by approximately 10 to 15 feet. This excavation removed the areas where verification samples BC14 through BC18, TD06, and TD07 were collected. New verification samples (BC19 through BC22) were collected and analyzed for VOCs, SVOCs, Michigan 10 metals, nickel, chromium VI, total cyanide, and PCBs.

The results of the soil analyses were compared to the protective of GSI criteria and found that nickel in sample BC20 exceeded the criteria. This area along with the area-containing sample BC19 was later excavated as part of the site's mass excavation. Thus, only BC21 and BC22 remain as excavation sidewall samples for the excavation activities on the north sidewall of the Area between TCE Areas B and C.

Summary of the Metal Area Field Activities
Former Stanley Tools Site
Fowlerville, Michigan

Prepared for:
Johnson Controls, Inc.

Prepared by:
Earth Tech – Weston
14 January 2004

The Earth Tech-Weston Project Team (ETW) has prepared this submittal on behalf of Johnson Controls, Inc. (JCI) to document the excavation and confirmation sampling of the Metal Area that contained Solid Waste Management Unit (SWMU) B near the southwestern corner of the former Stanley Tools site (Site) in Fowlerville, Michigan. These soils were excavated in July 2003 and transported to Sauk Trail Hills Type II Landfill in Wayne County, Michigan as part of the Interim Measures (IM) project associated with an Administrative Order on Consent (AOC, Docket No. RCRA-05-2003-0004) dated 20 December 2002.

Delineation and Excavation Activities

The RCRA Facility Investigation (RFI) report documented that green soil remained in the former SWMU-B. A sample of this green soil was collected from a test pit (TP13) in April 2003 and analyzed for Michigan 10 metals (arsenic, barium, cadmium, chromium, copper, lead, mercury selenium, silver, and zinc), nickel, chromium VI, and polychlorinated biphenyls (PCBs). Results of the analyses were compared to the protective of Groundwater/Surface Water Interface (GSI) criterion. Nickel, total chromium, chromium VI, and zinc were found to exceed the protective of GSI criteria. Historical (1994) soil samples, GB88, GB89, and GB90, and 2003 test pit 64 were collected from this area and contained various metals and/or cyanide above the protective of GSI criteria.

Excavation activities were conducted in July 2003. The excavation had approximately 100 feet by 70 feet and extended below the water table, which was approximately 7 feet below ground surface (bgs). These soils were excavated in July 2003 and transported to Sauk Trail Hills Type II Landfill in Wayne County, Michigan.

Confirmation Sampling, Analytical Results, and Additional Excavation

Verification samples were collected from both the floor and sidewalls of the excavation. Most of the floor was covered with water but a small portion of the floor near the southeast corner of the excavation was not. This portion of the floor was sampled. Using the Guidance Document Verification of Soil Remediation dated April 1994, Revision 1, eight sidewall and two floor verification soil samples were required. The verification samples (EM02 through EM11) were collected and analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), Michigan 10 metals (arsenic, barium, cadmium, chromium, copper, lead, mercury selenium, silver, and zinc), nickel, chromium VI, total cyanide, and PCBs.

A water sample was collected from the northwest corner of the excavation and analyzed for VOCs.

The analytical results for the ten soil samples and water sample were compared to the relevant GSI criteria. This comparison (summarized in the table below) showed that each either contained compounds that exceed the criteria or detection levels above the criteria.

Sample ID	Matrix	Compounds Detected Above the GSI Criteria
EM01	Water	Naphthalene, cis-1,2-Dichloroethene, Vinyl Chloride
EM02	Soil	
EM03	Soil	
EM04	Soil	
EM05	Soil	Cyanide, Copper, Nickel, Zinc, Mercury, Naphthalene, Ethylbenzene, Xylenes, 1,3,5-Trimethylbenzene, 1,2,4-Trimethylbenzene, 1,2-Dichlorobenzene
EM06	Soil	Copper
EM07	Soil	Nickel
EM08	Soil	Zinc
EM09	Soil	
EM10	Soil	Cyanide, Zinc
EM11	Soil	

Additional excavation activities were conducted in each direction from the TCE Area C excavation. These additional excavation activities were associated with the following work:

- Area between the western boundary of the Metal Area and the Red Cedar River was excavated.
- The area to the east was excavated as part of the "TPH Area". The portion of the excavation floor not extending to the water table was extended into the water table at this time.
- The northern boundary of the Metal Area was excavated as part of the "Kerosene Area".
- The southern boundary of the Metal Area was excavated as part of the "South Drain" excavation.

The result of these additional excavations was that each of the confirmation soil samples collected from the Metal Area sidewalls and floor have been excavated and removed from the site. Information concerning the sidewall verification samples used to document the remedial activities at the site will be addressed in the excavation summaries identified above.

Summary of the 2003 TPH/Fire Loop Area Field Activities
Former Stanley Tools Site
Fowlerville, Michigan

Prepared for:
Johnson Controls, Inc.

Prepared by:
Earth Tech – Weston
14 January 2004

The Earth Tech-Weston Project Team (ETW) has prepared this submittal on behalf of Johnson Controls, Inc. (JCI) to document the excavation and confirmation sampling of the TPH/Fire Loop Area that contained Solid Waste Management Unit (SWMU) K near the southern boundary of the former Stanley Tools site (Site) in Fowlerville, Michigan. These soils were excavated in 2003 and transported to either The Environmental Quality Company (EQ) disposal facility in Belleville, Michigan or the Sauk Trail Hills Type II Landfill in Wayne County, Michigan as part of the Interim Measures (IM) project associated with an Administrative Order on Consent (AOC, Docket No. RCRA-05-2003-0004) dated 20 December 2002.

Delineation and Excavation Activities

The TPH Area was identified at the site during the removal of the piping that was part of the fire suppression system at the site and the verification sample EM05. The area includes the generator room, and the boiler room, SWMU-K, which was the former location of a fuel oil tank. Little historical data was obtained from this area, so it was divided into three areas to allow investigation and excavation work to be conducted in phases. The three areas were identified as follows:

- Western TPH Area.
- Eastern TPH Area.
- Fire Loop Area.

Western TPH Area
The Western TPH Area began at the eastern edge of the Metal Area and extended approximately 100 feet to the east. Soil samples were collected throughout the area to delineate the extent of soil contamination and to characterize the soil for waste disposal. Samples were collected along a 25-foot grid established at the site. Samples were collected at the following grid points:

FF43	FF44	GG43	HH43
HH44	II40	II41	II42

Each of the samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and polychlorinated biphenyls (PCBs), while select samples were also analyzed for Michigan 10 metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver, and zinc), nickel, chromium VI, and cyanide. The results of this characterization activity identified 1,2,4-trimethylbenzene, metals, and cyanide present in the soil above the protective of Groundwater/Surface Water Interface (GSI) criteria. None of the soil samples were found to be PCB-containing (PCB greater than 50 mg/kg).

Excavation activities were conducted in July 2003. The excavation extended approximately 100 feet east of the Metal Area excavation. The excavation extended south from the TCE Area C excavation and the excavation between TCE Areas B and C to the property line. The excavation was extended below the water table, which was approximately 7 feet below ground surface (bgs). Excavated soils were transported to Sauk Trail Hills Type II Landfill in Wayne County, Michigan.

Eastern TPH Area
The Eastern TPH Area began at the eastern edge of the Western TPH Area and extended approximately 125 feet to the east. Soil samples were collected throughout the area to delineate the extent of soil contamination and to characterize the soil for waste disposal. Samples were collected along a 25-foot grid established at the site and at random test pit locations. Samples were collected at the following locations:

<u>Grid Sample Locations</u>

JJ4343	JJ44	KK43	KK44	LL43
LL44	LL45	MM43	MM44	MM45
M445	NN43	NN45		

<u>Test Pit Sample Locations</u>

TPN1	TPS1	TPW1
TPE1	TPM1	TPM2

Each of the samples from the grid sample locations was analyzed for PCBs, while select samples were also analyzed for VOCs, SVOCs, Michigan 10 metals, nickel, chromium VI, and cyanide. The test pit samples were primarily sampled for VOCs. The results of this characterization activity identified VOCs and metals present in the soil above the protective of Groundwater/Surface Water Interface (GSI) criteria. Soils obtained from locations JJ44, KK44, LL44, MM44, M445, and MM45 were found to be PCB-containing (PCB greater than 50 mg/kg).

Excavation activities were conducted in July 2003. The excavation extended approximately 125 feet east of the Western TPH Area excavation and south from the TCE Area B excavation to the property line. The excavation was extended below the water table, which was approximately 7 feet below ground surface (bgs). These soils were transported to both The Environmental Quality Company (EQ) disposal facility in Belleville, Michigan and Sauk Trail Hills Type II Landfill in Wayne County, Michigan.

Fire Loop Area
The Fire Loop Area began at the eastern edge of the Eastern TPH Area and nearly extended to the eastern property line. This area was investigated after the Eastern TPH Area verification

sample ET11 was found to contain PCBs at a concentration greater than 50 mg/kg. This investigation consisted of collecting soil samples along the former fire suppression line and along the 25-foot grid established for the site. The samples were collected to delineate the extent of soil contamination and to characterize the soil for waste disposal. Continuous soil samples were collected from the ground surface to the water table at the following locations:

OO43	OO44	OO45	PP43	PP45
QQ43	QQ45	RR43	RR45	SS45
FL01	FL02	FL03	FL04	

Each of the samples was analyzed for PCBs, while select samples were also analyzed for VOCs, SVOCs, Michigan 10 metals, nickel, chromium VI, and cyanide. The results of this characterization activity identified VOCs present in the soil above the protective of Groundwater/Surface Water Interface (GSI) criteria. PCBs were detected in the soil samples at concentrations that exceeded the TSCA level of 50 mg/kg and/or the site cleanup criterion of 16 mg/kg (see table below).

Sample Location	Sample depth (ft)	PCB result above 16 but below 50 mg/kg	PCB result above 50 mg/kg
OO45	0 to 2	22	
OO44	0 to 2		80
PP43	0 to 2	19	
PP43	2 to 4	390	
QQ45	0 to 2	39	
QQ43	0 to 2	22	
FL01	0 to 2		91
	2 to 4		390
	4 to 6		140
FL02	0 to 2		120
	2 to 4		130

Excavation activities were conducted in August 2003. The excavation was an irregular excavation that nearly extended to the eastern property line. The excavation was extended below the water table, which was approximately 7 feet below ground surface (bgs). Removed soils were transported to both The Environmental Quality Company (EQ) disposal facility in Belleville, Michigan and Sauk Trail Hills Type II Landfill in Wayne County, Michigan.

Confirmation Sampling, Analytical Results, and Additional Excavation

Verification samples were collected from sidewalls comprised of native material. Verification samples were collected from the floor of the excavation, if PCB-containing soils were present in the vadose zone. The Guidance Document Verification of Soil Remediation dated April 1994, Revision 1 was used to determine the number of verification samples to be submitted for analysis. The sidewall verification samples were analyzed for VOCs, SVOCs, Michigan 10 metals, nickel, chromium VI, while the floor samples were only analyzed for PCBs.

Western TPH Area

Four verification samples (BC10, BC11, BC12, and BC13) were collected from the south sidewall of the Western TPH excavation. No samples were collected from the other sidewalls because they were previously excavated or would be excavated. The samples results were compared to the protective of GSI criteria. A summary of this comparison is provided in the table below:

Sample ID	Concentration exceeded the protective of GSI Criteria
BC11	Cyanide, Copper, Nickel, Selenium, Zinc
BC12	Cyanide, Copper, Nickel, Selenium, Zinc
BC13	Cyanide

These verification samples were collected at the southern property boundary and all were subsequently removed during excavation activities associated with the South Ditch.

Eastern TPH Area

Seven sidewall verification samples (TE07, TE08, TE09, ET10, ET11, ET12, and TE13) were collected from the Eastern TPH excavation. The samples were collected from the south, east, and northern sidewalls. Note, most of the northern extent of the excavation was dug to the TCE Area B excavation. The sample results were compared to the protective of GSI criteria. A summary of this comparison is provided in the table below:

Sample ID	Concentration exceeded the protective of GSI Criteria
TE09	Mercury, Nickel
ET11	PCBs

After sample TE13 was submitted for analysis the thin column of native soil collapsed into the excavation and was removed. This removal of soil resulted in the northern extent of the excavation being the TCE Area B excavation. Verification samples TE09, ET10, and ET11 were removed during South Drain (TE09) or Fire Loop (ET10 and ET11) excavation activities.

Six floor samples (TE01, through TE06) were collected from the area that was identified as containing PCB at a concentration greater than 50 mg/kg. These samples were collected to evaluate if the PCB-containing soils were properly remediated. The analytical results showed that the PCB-containing soils were remediated vertically to concentrations below the cleanup criterion of 16 mg/kg.

Fire Loop Area

Fifteen sidewall (TE17 through TE31) and five saturated excavation floor samples (TE11, TE12, and TE14 through TE16) were collected from the Fire Loop investigation. A review of the analytical results identified the following detected parameters above the GSI criterion (direct contact for PCBs):

Location	**Concentrations exceed the Cleanup Criteria**
TE21	Zinc
	PCBs
TE27	Cyanide
TE28	Cyanide
TE30	Arsenic

Soil borings PC01 and PC02 were sampled to evaluate the soils between the Western TPH and Fire Loop excavations because of the PCBs present in sample TE21. These borings were sampled continuously from ground surface to the water table with each sample analyzed for PCBs. The samples were used to determine how the samples would be handled after excavation. The results showed that the shallow soils were PCB-containing (greater than 50 mg/kg). This area was then excavated in September 2003. Saturated floor samples were collected (TE 37 and TE38) and analyzed for PCBs to show that the PCB-containing soils were properly remediated. The results of these analyses show that PCBs were not detected in the samples.

The excavation was extended at samples TE27 and TE28 because both of these samples contained cyanide above the protective of GSI criterion. This additional excavation extended into the water table, meaning no verification samples would be collected from the floor. Sidewall samples TE32, TE33, and TE34 were collected and analyzed for arsenic (TE32 and TE33) and the full analytical suite (TE34). None of the analytical results exceeded the protective of GSI criteria.

A small area at sample TE30 was excavated to remove the arsenic that exceeded the cleanup criterion. After the soil was excavated to the water table, verifications samples TE35 and TE36 were collected and analyzed for arsenic. The results of these analyses were compared to the arsenic protective of GSI criterion. The concentrations detected in both samples were below the criterion.

Summary of Cyanide Area 2003 Field Activities
Former Stanley Tools Site
Fowlerville, Michigan

Prepared for:
Johnson Controls, Inc.

Prepared by:
Earth Tech – Weston
14 January 2004

The Earth Tech-Weston Project Team (ETW) has prepared this submittal on behalf of Johnson Controls, Inc. (JCI) to document the excavation and confirmation sampling of Cyanide impacted soils formerly east of Solid Waste Managements Units (SWMUs) B and C near the western margin of the former Stanley Tools site (Site) in Fowlerville, Michigan. These soils were excavated in July 2003 and transported to Sauk Trail Hills Type II Landfill in Wayne County, Michigan as part of the Interim Measures (IM) project associated with an Administrative Order on Consent (AOC, Docket No. RCRA-05-2003-0004) dated 20 December 2002.

Delineation and Excavation Activities

Historical analytical data indicated that TCE contamination was present under the western portion of the former building formerly containing the chemical storage area. Specifically, this area is defined by a soil sample collected in 1994 from location GB98, which contained a cyanide concentration that exceeded the protective of Groundwater/Surface Water Interface (GSI) criterion.

Excavation activities were conducted in July 2003. The irregular excavation had approximately 200 linear feet of sidewall and extended below the water table, which was approximately 7 feet below ground surface (bgs). These soils were excavated in July 2003 and transported to Sauk Trail Hills Type II Landfill in Wayne County, Michigan.

Confirmation Sampling, Analytical Results, and Additional Excavation

Verification samples were only collected from the sidewalls since the floor of the excavation was covered with water. Using the Guidance Document Verification of Soil Remediation dated April 1994, Revision 1, six verification soil samples were required from the sidewalls. The six verification samples (TD01 through TD05 and CM01) were collected and analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), Michigan 10 metals (arsenic, barium, cadmium, chromium, copper, lead, mercury selenium, silver, and zinc), nickel, chromium VI, total cyanide, and polychlorinated biphenyls (PCBs).

The analytical results for the eight soil samples were compared to the protective of Groundwater/Surface Water Interface (GSI) criteria. This comparison (summarized in the table below) showed that each either contained compounds that exceed the criteria or detection levels above the criteria.

Summary of Cyanide Area 2003 Field Activities
Former Stanley Tools Site
(Continued)

Sample ID	Compounds Detected Above the Protective of GSI Criteria
TD01	Cyanide
TD02	Cyanide, chlorobenzene, 1,4-Dichlorobenzene
TD03	Arsenic
TD04	1,2,4-Trimethylbenzene
CM01	Zinc

1. Arsenic in sample TD03 also exceeded the residential and industrial direct contact criteria.

Further excavation activities were conducted at the sidewall that contained sample TD02. These excavation activities removed approximately 10-feet of material along the length of the sidewall. After the additional removal activities were complete, two confirmation soil samples (TD06 and TD07) were collected and analyzed for VOCs and cyanide. The results of these analyses show that the sidewall still contains VOCs above the protective of GSI criteria.

Note, none of the sidewall confirmation samples obtained from the Cyanide Area remain at the site because removal activities of other nearby areas (Kerosene Area, Metal Area, TPH Area and the extension of TCE Area C) extended to the Cyanide Area.

Summary of PCB Delineation, Excavation, and Confirmation Sampling
Former Stanley Tools Site - Western Property Areas

Prepared for:
Johnson Controls, Inc.

Prepared by:
Earth Tech – Weston
11 August 2003

The Earth Tech-Weston Project Team (ETW) has prepared this submittal on behalf of Johnson Controls, Inc. (JCI) to document the delineation, excavation, and confirmation sampling of polychlorinated biphenyl (PCB)–impacted soils formerly present near the western margin of the former Stanley Tools site (Site) in Fowlerville, Michigan. These soils were excavated in July 2003 and transported to The Environmental Quality Company (EQ) permitted PCB disposal facility in Belleville, Michigan as part of the Interim Measures project associated with an Administrative Order on Consent (AOC, Docket No. RCRA-05-3002-0004) dated 20 December 2002.

Description of PCB-Impacted Areas

Historical analytical data indicated that three areas within the western portion of the Site contained soils with PCB concentrations above 50 milligram per kilogram (mg/kg). PCBs were also detected in phase-separated kerosene product associated with the Solid Waste Management Unit (SWMU)-C area (included within Area No. 1 below). Product samples from monitoring well MW-C3 and nearby test pits contained PCBs ranging from 500 mg/kg to 1,700 mg/kg.

Figure 1 shows the locations of the three areas, which are described below:

- Area No. 1 – southeast of the former treatment building (defined by the presence of kerosene and by surface soil sample GB-81 with 91 mg/kg PCBs).
- Area No. 2 - east of the treatment building (defined by surface soil sample GB-78 with 110 mg/kg PCBs).
- Area No. 3 - near the southeast corner of SWMU-A (defined by surface soil sample GB-64 with 76 mg/kg PCBs).

Delineation and Excavation Activities

ETW collected soil samples from locations within a 25-foot a grid using direct-push methods. At each sampling location, continuous soil samples were obtained from the ground surface to the water table, with analytical samples containerized at two-foot intervals. Each two-foot interval was analyzed at Trimatrix Laboratories, Inc. in Grand Rapids, Michigan for polychlorinated biphenyls (PCBs) using United States Environmental Protection Agency (USEPA) Method 8082.

Free product (kerosene) was delineated within Area 1 using test pits and existing monitoring wells. Two of the test pits contained free product. This product, along with soil samples from the smear zone in the test pits, was sampled and analyzed for PCBs. The data showed that PCB concentrations greater than 50 mg/kg were associated with the product, but PCBs were not present above 50 mg/kg in the smear zone soils. Additional verification test pits were excavated to visually confirm the lateral extent of the free product prior to excavation start up.

Within the free product portion of Area 1, the initial excavation was limited to vadose zone overburden material (from the ground surface to approximately 6 feet below grade). The excavation was then extended into the water table/saturated zone in a small area near monitoring wells MW-C1 through MW-C3 to allow an assessment and selection of free product collection and removal methods. Subsequent to that assessment, the entire product area was excavated below the water table and left open to further collect and remove product. Product was collected and removed using absorbent pads, booms, and vacuum methods. PCB-containing wastes from these efforts were containerized and disposed of per applicable regulations.

PCB Area Nos. 2 and 3 were excavated to a depth of approximately two feet below grade and subsequently sampled to confirm adequate PCB remediation had been achieved. Notably, Area Nos. 2 and 3 are located within larger IM areas planned for further excavations that will proceed to the water table.

Confirmation Sampling and Analytical Results

Verification of Soil Remediation (VSR) confirmation soil samples were collected from the floor of each excavated PCB Area. Sidewall samples were collected from the eastern edge of Area I excavation, but not from the other sides of the excavation or Areas 2 and 3 because they were part of the larger excavation completed at the site.

Area No. 1

This area was determined to be 7,160 square feet. Eight samples (FPEX and FP01 through FB07) were collected from the floor of the excavation per MDEQ guidance[1]. The samples were collected from the bucket of the excavator. A review of the Area No. 1 analytical results shows that PCBs were not present in the VSR samples above 1 mg/kg, as shown in Table 1 below.

Table 1-Area No. 1 PCB VSR Sample Results		
Sample ID	**Sample Location**	**PCB Result (mg/kg)**
FPEX	Floor	None detected
FP01	Floor	0.072 J
FP02	Floor	0.28 J
FP03	Floor	0.026 J
FP04	Floor	0.16 J
FP05	Floor	0.29 J
FP06	Floor	Not detected
FP07	Floor	0.067 J

Three sidewall samples (FP08 through FP10) were collected from the eastern edge of the excavation. Samples FP09 and FP10 were analyzed for volatile organic compounds (VOCs),

[1] Michigan Department of Environmental Quality's Guidance Document Verification of Soil Remediation (April 1994, Revision 1)

semi-volatile organic compounds (SVOCs), Michigan 10 metals (arsenic, barium, cadmium, copper, chromium, lead, mercury, selenium, silver, and zinc), nickel, cyanide, and polychlorinated biphenyls (PCBs). Sample FP08 was not submitted for analysis because it contained black staining and a petroleum odor.

The results of the sidewall soil sample analysis were compared to the protective of groundwater/surface water interface (GSI). This comparison found that sample FP10 contained 1,2,4-Trimethylbenzene, 1,2-Dichlorobenzene, cyanide, and chromium VI at concentrations above the protective of GSI criteria. Each of these sample locations (FP08 through FP10) were later excavated as part of the excavation plan for the site. Verification samples will be discussed in the Mass Excavation report.

Area No. 2

The Area No. 2 excavation floor was approximately 455 square feet. Thus, two VSR floor samples were collected (PCB1 and PCB2) per MDEQ guidance and analyzed for PCBs. Floor sample PCB1 was intentionally located near historical sample GB-78, which was documented to have contained 110 mg/kg of PCBs. The samples were collected by hand since the samples were collected after the excavation was at a depth of 2 feet below ground surface (bgs). This area was later excavated below the water table.

The results of the analyses show that PCBs were not present in the VSR floor samples above 1 mg/kg, as shown in Table 2 below.

Table 2-Area No. 2 PCB VSR Sample Results		
Sample ID	**Sample Location**	**PCB Result (mg/kg)**
PCB1	Floor	0.019 J
PCB2	Floor	0.011 J

Area No. 3

The Area No. 3 excavation floor was approximately 355 square feet. Thus, two VSR floor samples were collected (PCB3 and PCB4) per MDEQ guidance and analyzed for PCBs. Floor sample PCB3 was intentionally located near historical sample GB64, which was documented to have contained 76 mg/kg of PCBs. The samples were collected by hand since the samples were collected after the excavation was at a depth of 2 feet bgs. This area was later excavated below the water table.

The results of the analyses show that PCBs were not present in the VSR floor samples above 1 mg/kg, as shown in Table 3 below.

Table 3-Area No. 3 PCB VSR Sample Results		
Sample ID	**Sample Location**	**PCB Result (mg/kg)**
PCB3	Floor	0.010 J
PCB4	Floor	0.057 J

Summary of the 2003 Mass Metal Excavation Field Activities
Former Stanley Tools Site
Fowlerville, Michigan

Prepared for:
Johnson Controls, Inc.

Prepared by:
Earth Tech – Weston
14 January 2004

The Earth Tech-Weston Project Team (ETW) has prepared this submittal on behalf of Johnson Controls, Inc. (JCI) to document the excavation and confirmation sampling of the area surrounding Solid Waste Management Unit (SWMU) A at the former Stanley Tools site (Site) in Fowlerville, Michigan. The excavation, called the "mass excavation", removed soils primarily containing metals and cyanide above the protective of Groundwater/Surface Water Interface (GSI) criterion. The excavated soils were transported to Sauk Trail Hills Type II Landfill in Wayne County, Michigan as part of the Interim Measures (IM) project associated with an Administrative Order on Consent (AOC, Docket No. RCRA-05-2003-0004) dated 20 December 2002.

Delineation and Excavation Activities

Historical data obtained from the site was re-evaluated by comparing the soil analytical results to the current (December 2002) Michigan Department of Environmental Quality (MDEQ) cleanup criteria. Specifically, the protective of Groundwater/Surface Water Interface (GSI) criteria was used for the evaluation. This evaluation was used to develop a planned excavation area to remove metals and cyanide present in the site soils. The final excavation boundaries were modified in the field as new data became available.

The excavation of the total area of the excavation (floor and sidewall) was determined to be approximately 204,750 square feet with an average sidewall length of 400 feet. Using the formula for a large site in the Verification of Soil Remediation document a grid interval of 40 feet was determined. This grid interval was used when collecting verification samples from the excavation sidewalls. No floor samples were collected because the excavation extended below the water table. The excavated soils were transported to Sauk Trail Hills Type II landfill in Wayne County, Michigan.

Confirmation Sampling, Analytical Results, and Additional Excavation

Verification samples were collected from sidewalls in accordance with the large excavation calculation provided in the Verification of Soil Remediation dated April 1994, Revision 1 as discussed above. The sidewall verification samples were analyzed for VOCs, SVOCs, PCBs, Michigan 10 metals, nickel, chromium VI, and cyanide, while the floor samples were only analyzed for PCBs. To simplify the discuss of the results, the verification sampling was divided into the following sections:

- Riverbank

- North wall
- East wall
- Product area

Riverbank

Nine sidewall verification samples were collected from the western sidewall that paralleled the Red Cedar River. These samples have been identified as MD01, MD02, MD03, and MD22 through MD27. The sample analytical results were compared to the protective of GSI criteria. A summary of this comparison is provided in the table below:

Sample ID	Concentration exceeded the protective of GSI Criteria
MD01	Cyanide, Copper, Nickel, Selenium, Zinc
MD02	Cyanide, Copper, chromium VI, Nickel, Zinc
MD03	Zinc
MD22	Selenium
MD23	Selenium
MD27	Cyanide, Copper, Zinc

Samples MD01, MD02, MD03, and MD27 were collected from fill material that was present in the sidewall. The area that contained these samples was excavated as part of the Riverbank excavation and the sample results are discussed in that report.

North Wall

Twenty-five sidewall verification samples (MD04 through M21 and MD28 through 34) were collected from the northern wall of the excavation. The samples results were compared to the protective of GSI criteria. A summary of this comparison is provided in the table below:

Sample ID	Concentration exceeded the Protective of GSI Criteria	Detection Level exceeded the Protective of GSI Criteria
MD04	Cyanide, Chromium VI, Selenium	
MD05	Cyanide, Selenium	
MD06	Fluoranthene	
MD07	Cyanide, Selenium	Chromium VI
MD08	Mercury, Selenium	Chromium VI
MD09	Chromium VI, Selenium	
MD10	Selenium	
MD11	Cyanide, Copper, Nickel, Selenium, Zinc	
MD12	Cyanide, Copper, Mercury, Selenium, Silver, Zinc	
MD13	Cyanide, Chromium VI, Mercury, Selenium	

Summary of the 2003 Mass Metal Excavation Field Activities
Former Stanley Tools Site
(Continued)

Sample ID	Concentration exceeded the Protective of GSI Criteria	Detection Level exceeded the Protective of GSI Criteria
MD14	Cyanide, Mercury	Chromium VI
MD15	Mercury, Selenium	
MD16	Arsenic, Selenium	Chromium VI
MD17	Cyanide, Chromium VI, Mercury	
MD18	Cyanide, Chromium VI, Selenium	
MD19	Cyanide, Chromium VI, Zinc	
MD29	Selenium	
MD30	Chromium VI, Selenium	
MD31	Fluoranthene, Chromium VI, Selenium	
MD32	Cyanide, Selenium	
MD33	Chromium VI, Copper, Mercury, Selenium, Silver, Zinc	
MD34	Cyanide, Chromium VI, Copper, Nickel, Zinc	

After reviewing these results and samples results from sampling conducted north of the North Drain (see report Area North of North Drain), additional excavation activities were conducted. The following areas were excavated:

- Area containing MD05 and MD06
- Area containing MD10, MD11, MD12, and MD13
- Area containing MD17, MD18, and MD19
- Area containing MD32, MD33, and MD34

Additional soil was removed from the areas that contained MD05 and MD06 because cyanide and selenium at MD05 and fluoranthene at MD06 exceeded the protective of GSI criteria. After excavation activities, soil samples MD106 and MD107 were collected and analyzed for chromium VI, copper, mercury, silver, and selenium. Sample MD108 was analyzed for SVOCs. The results of these analyses were compared to the protective of GSI criteria and selenium exceeded the criterion in both MD106 and MD107. The chromium VI detection level was higher than the criterion for sample MD106.

Additional soil was removed from the areas that contained MD10 through MD13 because cyanide, copper, nickel, selenium mercury, and zinc exceeded the protective of GSI criteria at one or more locations. After excavation activities, verification samples MD109, MD110, and MD111 were collected and analyzed for cyanide, copper, nickel, selenium, mercury, arsenic, and zinc. The results were compared to the protective of GSI criteria, which identified the following:

- MD109 contained selenium above the criterion.
- MD110 contained mercury, cyanide, and selenium above the criteria.
- MD111 contained mercury and selenium above the criteria.

Additional soil was removed from the area containing MD17, MD18, and MD19 because of the cyanide, chromium VI, selenium, and zinc exceeded the protective of GSI criteria. After the additional soils were removed, verification samples MD112 and MD113 were collected and analyzed for arsenic, cyanide, chromium VI, selenium, and zinc. The results were compared to the protective of GSI criteria and found that cyanide (MD112) and selenium (MD112 and MD113) exceeded the criteria. The chromium VI detection level for both samples was higher than the cleanup criterion because the sample needed to be diluted.

Samples MD32, MD33, and MD34 were collected from an area that contained soil that was discolored. Additional soils were removed and verification samples MD70, MD71, and MD72 were collected and analyzed for VOCs, SVOCs, PCBs, Michigan 10 metals, nickel, chromium VI, and cyanide. The results were compared to the protective of GSI criteria and found that selenium exceeded the criteria at locations MD70 and MD71. The chromium VI detection level for each of the samples was higher than the cleanup criterion because the sample needed to be diluted.

East Wall

During the excavation activities, additional soil samples were collected to identify the eastern extent of the excavation. These samples (EF01, EF02, EF03, FF27, FF37, GG31, and GG34) were analyzed for cyanide and chromium VI because these were the main constituents driving the excavation. Samples EF01 through EF03 were collected from the sidewall of the excavation. The results from these analyses were compared to the protective of GSI criteria and none of the samples were found to exceed the criteria. Thus, the excavation was stopped and confirmation samples collected.

Eleven sidewall samples (MD35, MD45, MD46, and MD73 through MD80) were collected from the eastern sidewall of the excavation. A review of the analytical results only identified cyanide at MD77 above the protective of GSI criterion.

During the excavation activities, an east-west pipe was identified near the location of the former treatment building. Stained soils were identified in the backfill material of the pipe. The Village of Fowlerville was notified concerning the pipe. They stated that the pipe was an old storm sewer and that it could be removed.

A sample (PCB05) was collected of the stained saturated soil to determine if it was PCB containing. The analytical results of this sample found that the PCBs present in the sample were less than 1 mg/kg.

A section of the pipe and the stained soil were then removed. At the end of the excavation the remaining sewer pipe was plugged with concrete and verification samples (MD88 through MD95) were collected from the trench. The samples results were compared to the protective of GSI criteria. A summary of this comparison is provided in the table below:

Sample ID	Concentration exceeded the Protective of GSI Criteria
MD8104	Cyanide
MD82	Cyanide
MD88	Selenium
MD90	Selenium
MD91	Selenium
MD92	Chromium VI
MD94	Selenium

Product Area

The product excavation was extended to the Metal Mass dig excavation because verification samples were found to exceed the protective of GSI criteria. After this area was excavated, four sidewall verification samples (MD54 through MD57) were collected and submitted for analysis. The results of these analyses were compared to the protective of GSI criteria. This comparison identified cyanide in sample MD54 and selenium in sample MD57 at concentrations that exceeded the criterion.

Summary of South Drain 2003 Field Activities
Former Stanley Tools Site
Fowlerville, Michigan

Prepared for:
Johnson Controls, Inc.

Prepared by:
Earth Tech – Weston
14 January 2004

The Earth Tech-Weston Project Team (ETW) has prepared this submittal on behalf of Johnson Controls, Inc. (JCI) to document the excavation and confirmation sampling of the South Drain located immediately south of the former Stanley Tools site (Site) in Fowlerville, Michigan. These soils were excavated in October 2003 and transported to Sauk Trail Hills Type II Landfill in Wayne County, Michigan as part of the Interim Measures (IM) project associated with an Administrative Order on Consent (AOC, Docket No. RCRA-05-2003-0004) dated 20 December 2002.

Delineation and Excavation Activities

Historical analytical data indicated that metals and cyanide were detected in the South Drain sediments above the protective of Groundwater/Surface Water Interface (GSI), protective of Drinking Water, and Direct Contact criteria. Historic samples collected in the South Drain are SE/SD-1/1, SE/SD-2/1, SE/SD-3/1, SE/SD-4/1, SE/SD-5A/1, SE/SD-5/1, SE/SD-6/1, SE/SD-6/2, GB92, GB92, and GB94. Current analytical data (2003) obtained from sidewall verification samples collected at the property line (EM07, EM08, BC10, BC11, BC12, BC13, TE07, TE08, TE09, TE18, and TE19) were used to determine the depth of the excavation at the northern boundary. The South Drain excavation removed the areas containing verification samples EM07, EM08, BC10, BC11, BC12, BC13, and TE09.

Excavation activities were conducted in October 2003. Excavation activities were conducted on CSX property and under a CSX permit, limiting excavating near the railroad tracks. The excavation was completed deeper at the property line then tapering south towards the railroad tracks. The presence of telephone poles paralleling the tracks also limited excavation activities near them. The floor of the excavation was approximately 12,100 square feet. The excavated soils were transported to Sauk Trail Hills Type II Landfill in Wayne County, Michigan.

During the excavation activities, a metal pipe was found to run the length of the excavation, extending off-site to the east. The Village of Fowlerville was contacted to determine the type of pipe and if it could be removed. Village personnel believed that the pipe was an old forced main sewer and did not want the pipe removed.

Confirmation Sampling, Analytical Results, and Additional Excavation

Verification samples were only collected from the floor of the excavation. Sidewall samples were not collected because the walls were as follows:

- Northern wall was backfill material from earlier excavations.
- Eastern wall was tapered and treated as part of the floor sampling.
- Southern wall was composed of railroad slag.
- Western wall was tapered towards the Red Cedar River and was treated as part of the floor sampling.

Using the Guidance Document Verification of Soil Remediation dated April 1994, Revision 1, six verification soil samples were required from the excavation floor. The 12 verification samples (MS01 through MS12) were collected and analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), Michigan 10 metals (arsenic, barium, cadmium, chromium, copper, lead, mercury selenium, silver, and zinc), nickel, chromium VI, total cyanide, and polychlorinated biphenyls (PCBs). Samples were collected from near various potential sources of contamination including:

- Railroad slag around telephone pole (MS02).
- Red brick (MS07).
- Concrete foundation (MS08).
- Metal pipe possibly a sanitary sewer (MS05 and MS10 (near joint)).
- Clay pipe (MS11).

The analytical results for the 12 soil samples were compared to the protective of Groundwater/Surface Water Interface (GSI) criteria, direct contact, and drinking water. This comparison is summarized in the table below.

Sample Identification	**Compounds Exceeding the Protective of GSI Criteria**	**Compounds exceeding the Direct Contact Criterion**	**Compounds exceeding the Protective of Residential Drinking Water Criterion**
MS01	Selenium	Arsenic **(residential)**	
MS02	Copper, Selenium, Zinc	Arsenic **(residential, commercial, and industrial)**	Arsenic
MS03	Selenium	Arsenic **(residential, commercial, and industrial)**	Arsenic
MS04	Selenium	Arsenic **(residential)**	
MS05	Copper, Nickel, Selenium, Mercury, Zinc, Chromium VI, Cyanide	Arsenic **(residential)**	Nickel, Zinc, Trichloroethene
MS06	Selenium, Chromium VI	Arsenic **(residential, commercial, and industrial)**	Arsenic
MS07	Selenium	Arsenic **(residential, commercial, and industrial)**	Arsenic

Summary of South Drain 2003 Field Activities
Former Stanley Tools Site
(Continued)

Sample Identification	Compounds Exceeding the Protective of GSI Criteria	Compounds exceeding the Direct Contact Criterion	Compounds exceeding the Protective of Residential Drinking Water Criterion
MS08	Selenium Zinc	Arsenic **(residential)**	Arsenic
MS09	Selenium		
MS10	Selenium	Arsenic **(residential)**	Arsenic
MS11	Selenium	Arsenic **(residential)**	
MS12	Selenium		

The excavation was extended another 2-feet at sample location MS05 and re-sampled. The new sample was submitted to the laboratory and analyzed for the VOCs, Michigan 10 metals, nickel, chromium VI, and cyanide. The results were compared to the various cleanup criteria, which found that only trichloroethene was present in a concentration (140 ug/kg) that exceeded the protective of drinking water criterion (100 ug/kg).

Summary of the Riverbank 2003 Field Activities
Former Stanley Tools Site
Fowlerville, Michigan

Prepared for:
Johnson Controls, Inc.

Prepared by:
Earth Tech – Weston
14 January 2004

The Earth Tech-Weston Project Team (ETW) has prepared this submittal on behalf of Johnson Controls, Inc. (JCI) to document the excavation and confirmation sampling of the eastern riverbank of the Red Cedar River located immediately west of the former Stanley Tools site (Site) in Fowlerville, Michigan. These soils were excavated in September 2003 and transported to Sauk Trail Hills Type II Landfill in Wayne County, Michigan as part of the Interim Measures (IM) project associated with an Administrative Order on Consent (AOC, Docket No. RCRA-05-2003-0004) dated 20 December 2002.

Delineation and Excavation Activities

Excavation of the riverbank was conducted in two phases during September 2003. These phases divided the riverbank into two sections, north and south of the former treatment building. The northern phase was conducted after the mass excavation was completed west of Solid Waste Management Unit (SWMU) A. The mass excavation stopped approximately 20 feet from the rivers edge. Fill material could be seen in a portion of the sidewall. Analytical results from sidewall verifications samples collected from the fill material portion of the sidewall (MD26, MD27, MD01, MD02, and MD03) showed that metals were present at concentrations above the protective of Groundwater/Surface Water Interface (GSI) criteria. The areas where these samples were collected were removed during this excavation phase.

The second phase involved excavating the soils remaining between the Kerosene and Metal Areas excavations and Red Cedar River. These soils were removed because stained or discolored and petroleum odors were identified in the sidewalls near the river. Before this area was excavated, continuous soil samples were collected from eight soil borings (RB01 through RB08) from the ground surface to approximately 2 feet below the water table. Each 2 foot sample interval was submitted to the laboratory and analyzed for polychlorinated biphenyls (PCBs). None of the samples contained PCBs at a concentration greater than 50 mg/kg, meaning the soils did not have to be handled as TSCA waste.

Both phases excavated the soils to approximately 0.5 to 1 foot above the surface of the river. The first phase excavated an area approximately 215 feet by 20 feet resulting in a base of the excavation of 4,200 square feet. The second phase of the riverbank work was approximately 200 feet by 20 feet resulting in an approximate 4,000 square foot floor of the excavation. The excavated soils from both phases were transported to Sauk Trail Hills Type II landfill in Wayne County, Michigan.

Confirmation Sampling, Analytical Results, and Additional Excavation

Verification samples were only collected from the floor of the excavation. Sidewall samples were not collected because the walls were as follows:

- Northern wall (northern phase) was tapered and treated as part of the floor sampling.
- Western wall (both phases) was tapered towards the Red Cedar River and was treated as part of the floor sampling.
- Eastern wall (both phases) was clean backfill from earlier excavations.
- Southern wall (southern phase) was excavated and sampled as part of the South Drain excavation activities.

Using the Guidance Document Verification of Soil Remediation dated April 1994, Revision 1, seven verification soil samples were required from the floor of both phases of excavation activity. The 14 verification samples (MD47 through MD53 for the northern phase and MD81 through MD87) were collected and analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), Michigan 10 metals (arsenic, barium, cadmium, chromium, copper, lead, mercury selenium, silver, and zinc), nickel, chromium VI, total cyanide, and polychlorinated biphenyls (PCBs).

The analytical results for the 12 soil samples were compared to the protective of Groundwater/Surface Water Interface (GSI) criteria, direct contact, and drinking water. This comparison is summarized in the table below.

Sample Identification	Compounds Exceeding the Protective of GSI Criteria	Compounds where detection limit Exceeds the Protective of GSI Criteria
Northern Phase		
MD47	Chromium VI	
MD49		Chromium VI
MD52	Cyanide, Zinc	
MD53		Chromium VI
Southern Phase		
MD81	Cyanide	
MD82	Cyanide	

Additional soils were excavated from the northern phase of the riverbank excavation based on olfactory evidence (odors) and the analytical results of the verification samples. A summary of the additional excavation activities, why they were excavated, and verification sampling are provided below:

- During the excavation of the riverbank, a petroleum odor was identified near MD02. Additional soils were removed to the water table and sidewall confirmation samples (MD36 through MD39) were analyzed for VOCs, SVOCs, Michigan 10 metals, nickel, chromium VI, total cyanide, and PCBs. None of the analytical results exceeded the protective of GSI criteria.

- The MD47 area was excavated to the water table and three sidewall verification samples (MD96, MD97 and MD98) were collected. The samples were analyzed for total chromium and chromium VI. None of the analytical results exceeded the protective of GSI criteria.
- The MD49 area was excavated to the water table and two sidewall verification samples (MD99 and MD100) were collected. The samples were analyzed for total chromium, arsenic, cyanide, zinc, and chromium VI. None of the analytical results exceeded the protective of GSI criteria, but the detection level for chromium VI was above the criterion for sample MD99.
- The MD52 area was excavated to the water table and two sidewall verification samples (MD101, MD102, MD103, and MD104) were collected. The samples were analyzed for total chromium, arsenic, cyanide, zinc, and chromium VI. None of the analytical results exceeded the protective of GSI criteria, but the detection level for chromium VI was above the criterion for samples MD101, MD102, and MD104.

Summary of Work Activities – Area North of North Drain
Former Stanley Tools Site
Fowlerville, Michigan

Prepared for:
Johnson Controls, Inc.

Prepared by:
Earth Tech – Weston
13 January 2004

Little historical analytical data was present in the area north of the North Drain and west of Solid Waste Management Unit (SWMU) G. As a supplement to the excavation sidewall samples, the Earth Tech/Weston team collected additional soil samples from twelve soil borings. The locations (MD58 through MD69) were positioned in a line spaced approximately 40-feet apart and 20-feet north of the North Drain. Locations MD67 through MD69 were modified in the field because the mass excavation extended north of the drain at their locations.

A hand Auger was used at each location to collect the soil sample at each location. The samples were collected from the unsaturated interval above the water table unless the soils were discolored or contained an odor. Each sample was analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), Michigan 10 metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver and zinc), nickel, hexavalent chromium, and cyanide. Results were compared to the protective of groundwater/surface water interface (GSI) criteria with a summary of this comparison provided in the following Table.

Sample ID	VOCs	SVOCs	PCBs	Metals/Cyanide	Chromium VI detection limit above criterion	Selenium detection limit above criterion
MD58	Okay	Okay	Okay	Okay	Yes	
MD59	Okay	Okay	Okay	Okay	Yes	
MD60	Okay	Okay	Okay	Hex Cr 4.5; Hg 0.16; Se 0.82		
MD61	Okay	Okay	Okay	Okay	yes	
MD62	Okay	Okay	Okay	Hg 0.14	yes	Yes
MD63	Okay	Okay	Okay	Se 2; Hg 0.13; CN 0.63	yes	
MD64	Okay	Okay	Okay	Hg 0.14	yes	
MD65	Okay	Okay	Okay	Okay	yes	
MD66	Okay	Okay	Okay	Hg 0.13	yes	

Summary of Work Activities – Area North of North Drain
Former Stanley Tools Site

Sample ID	VOCs	SVOCs	PCBs	Metals/Cyanide	Chromium VI detection limit above criterion	Selenium detection limit above criterion
MD67	Okay	Okay	Okay	Hex Cr 9.3; Ag 1-1		
MD67 dup	Okay	Okay	Okay	Se 1.0	yes	
MD68	Okay	Okay	Okay	Hex Cr 11; Cu 238; Hg 0.17; Se 0.89; Ag 1.3		
MD69	Okay	Okay	Okay	Se 0.81	yes	

1. Arsenic was present in the MD63 soil sample at a concentration (39 mg/kg) that exceeded the industrial direct contact number of 37 mg/kg.
2. Shaded areas were excavated and removed from site.

The laboratory was contacted concerning the high detection limits for the hexavalent chromium. The laboratory Project Manager explained that a sample is diluted if there is color in the leachate extracted from the sample. These samples were organic-rich soils that were collected from the wetland area.

Additional soil excavation of the area near the North Drain was conducted on 3 October 2003. This removal activity was conducted to remove specific areas identified in the sidewall confirmation sampling and/or the samples collected north of the North Drain. The areas that included sample locations MD63 and MD68 were removed at this time.

Summary of Work Activities - Solid Waste Management Unit A
Former Stanley Tools Site
Fowlerville, Michigan

Prepared for:
Johnson Controls, Inc.

Prepared by:
Earth Tech – Weston
13 January 2004

Solid Waste Management Unit (SWMU) A consisted of a lagoon with four sub-lagoons. The lagoons were designed to allow particulate metal and metal hydroxide to settle out from treated plant wastewater. The lagoons accepted electroplating wastewater from the clarifier underflow and the roto-finisher. Wastewater from the neutralization basin that treated wastes from the acid-alkaline rinses was also discharged to the lagoons. Closure activities were conducted under interim status regulations and pursuant to 40 Code of Federal Regulations, Part 265, Subpart G in 1985 and 1986. A Closure Certification Report was submitted in September 1994.

Initial Closure Activities

The initial closure activities consisted of the collection of sludge samples from each of the four sub-lagoons present in SWMU-A. These samples were used for waste characterization and to evaluate the composition of the sludge. The results of the sludge composition evaluation are provided in the table below:

Parameter	**Total Metals (Percent of Dry Weight)**
Arsenic	<0.000272
Barium	<0.01
Cadmium	<0.0004
Total Chromium	2.14
Copper	3.36
Lead	<0.001
Mercury	<0.000589
Nickel	1.64
Selenium	<0.000544
Silver	<0.0004
Zinc	4.00
PH	9.02
Percent Solids	3.16

The initial removal activities (1985) consisted of dewatering the sludge remaining in the impoundments, removing the sludge, and excavating contaminated soil. The total volume of sludge removed was approximately 349,500 gallons. After the sludge was removed, piping, internal impoundment dikes, a foot of soil/sludge from the floor of the lagoon, and approximately 6-inches from the lagoon sidewalls were removed. Approximately 3,250 cubic yards of soil was excavated and disposed as hazardous material. Volatile organic (i.e., kerosene) contamination was identified in the south sidewall of SWMU-A, coinciding with the former location of SWMU-E. This area was to be addressed in the RFI investigation.

Confirmatory soil samples were collected from ten locations. Analytical results obtained from these samples were compared to site background numbers that were established for the site. This comparison showed that additional soil needed to be removed.

An additional 3,820 cubic yards of soil was removed in 1986. The removal activities were conducted at the bottom of the impoundment completing the excavation into the water table. Twenty confirmation samples were collected from the following locations:

- 12 soil samples from the bottom of excavation.
- Four soil samples from the sidewalls (two from the south wall and two from the southern half of the east wall).
- Two soil samples from outside the excavation (two north and two south of the excavation).

The samples were analyzed for lead, cadmium, arsenic, cyanide, nickel, copper, chromium, and zinc. The Earth Tech/Weston team compared these analytical results to the protective of groundwater/surface water interface (GSI) criteria. The following were detected in concentrations above the protective of GSI:

Sample ID	Parameter	Detected Concentration (mg/kg)	Protective of GSI Criteria (mg/kg)	Sample Location
10N, 30W	Chromium	5.0	3.3	SWMU-A
10S, 60E	Chromium	3.4	3.3	East sidewall
10S, 30W	Chromium	6.0	3.3	SWMU-A
30N, 30E	Chromium	4.8	3.3	SWMU-A
30N, 30W	Chromium	7.8	3.3	SWMU-A
30S, 60E	Chromium	3.4	3.3	East sidewall
30S, 30W	Chromium	7.2	3.3	SWMU-A
50N, 30E	Chromium	7.0	3.3	SWMU-A
50N, 30W	Chromium	6.4	3.3	SWMU-A
50S, 30E	Chromium	3.8	3.3	SWMU-A
50S, 30W	Chromium	8.8	3.3	SWMU-A
70N, 30E	Chromium	4.2	3.3	SWMU-A
70N, 30W	Chromium	6.4	3.3	SWMU-A
70S, 30W	Chromium	5.8	3.3	South sidewall
90N, 30E	Chromium	5.0	3.3	North of SWMU-A

Sample ID	Parameter	Detected Concentration (mg/kg)	Protective of GSI Criteria (mg/kg)	Sample Location
90N, 30W	Chromium	5.8	3.3	North of SWMU-A
90S, 30W	Chromium	5.6	3.3	South of SWMU-A

1. Chromium analysis conducted on the confirmation samples was for total chromium, while the protective of GSI for chromium VI is used for comparison.
2. Shaded samples were located in areas that were excavated in 2003.
3. mg/kg – milligrams per kilogram

2003 Site Work

1) Excavation Activities

During the 2003 remedial activities, SWMU-A was located within the area that was excavated. The excavation removed soils to just below water table around SWMU-A. The excavation activities, however, did not include the base of SWMU-A. The base of SWMU-A was not excavated because of the closure activities previously conducted. No soil samples were collected from the excavated areas because the excavation extended into the water table.

The excavation south of SWMU-A removed the soils containing volatile organics. These soils were identified during the SWMU-A closure activities and are probably associated with SWMU-E. Visual observations of staining, however, were noted in the sidewall near the southeast corner of SWMU-A. These soils were excavated on 9 September 2003. Before the soils were excavated, soil samples were collected continuously to 6-feet at location SWA1 and analyzed to determine if they contained polychlorinated biphenyls (PCBs). None of the samples were found to contain PCBs above 50 parts per million.

Soil confirmation samples were collected from the base of this excavation (MD43 and MD44), the west sidewall (MD-40), and the north sidewall (MD-41 and MD42). No samples were collected from the south and east sidewalls because these soils were removed as part of the site excavation plan. The samples were submitted to the laboratory to be analyzed for volatile organic compounds, semi-volatile organic compounds, PCBs, Michigan 10 metals, nickel, chromium VI, and total cyanide.

The analytical results were compared to the protective of GSI criteria. This comparison found that total cyanide was the only parameter that exceeded the criteria. The cyanide results are presented in the following table.

Sample Location	Total Cyanide (mg/kg)	Protective of GSI Criterion (mg/kg)
MD40	0.45	0.39
MD41	2.2	0.39
MD42	1.3	0.39

Sample Location	Total Cyanide (mg/kg)	Protective of GSI Criterion (mg/kg)
MD43	0.0316 J	0.39
MD44	Less then 0.2	0.39

1. mg/kg – milligrams per kilogram
2. J – value is below the reporting limit

Three (MD40, MD41, and MD42) of the five samples contained cyanide concentrations that exceeded the protective of GSI criteria. The laboratory was then asked to analyze the leachate derived from sample MD41 using the synthetic precipitation leaching procedure for cyanide. The result of this analysis [<5 micrograms per liter (µg/L) of cyanide] is below the GSI criterion of 5.2 µg/L. Thus, the concentrations present in samples MD40, MD41, and MD42 are not expected to leach to the groundwater in concentrations above the GSI criterion.

2) SWMU-A Sampling Activities

Additional samples were collected from the base of SWMU-A and analyzed for both total and chromium VI. The samples were to be used to determine if chromium VI was present in the soils. By analyzing for chromium VI in the samples, the total chromium results (minus the chromium VI results) could be compared to the protective of GSI criterion for chromium III. If the chromium VI analyses were not conducted, the total chromium results would be compared to the protective of GSI criterion for chromium VI.

The base of SWMU-A is approximately 145 feet by 185 feet or (26,825 square feet). Using the Verification of Soil Document (April 1991), 48 grid points were available for sampling. The guidance document states that a minimum of 12 samples or 0.25% of the grid points (whichever is larger) is required for verification. The 12 grid points that were sampled were determined using the Random Numbers Table in the guidance document. Some of the samples were moved, however, since a portion of the SWMU contained standing water. The samples were obtained from the top 6-inches and analyzed for total and chromium VI.

The results of these analyses were compared to the protective of GSI criterion for chromium VI (chromium VI analysis) and chromium III (total chromium analysis). This comparison shows that none of the samples exceed their respective criteria.

Summary

A review of the closure report submitted for SWMU-A identified the following discrepancies:

1. Samples were not analyzed for chromium VI.
2. Total chromium samples not analyzed for chromium VI are to be compared to chromium VI criteria. Most of the total chromium results exceeded the protective of GSI criterion for chromium VI.

3. Volatile organics were identified in the south wall of the lagoon, which coincides with former location of SWMU-E.

Activities conducted in 2003 to address the discrepancies identified in the SWMU-A closure report included:

1. Twelve soil samples were collected from the base of SWMU-A and analyzed for total chromium and chromium VI. The results of these analyses were compared to the protective of GSI criterion for chromium VI (chromium VI analysis) and chromium III (total chromium analysis). This comparison shows that none of the samples exceed their respective criteria.
2. Site excavation activities removed soils around SWMU-A to below the water table. The base of SWMU-A was not excavated. The excavation activities remove the soils containing the volatile organics. Soil samples were collected and analyzed from the area where staining was identified and removed. These samples did not contain concentrations of volatile organics above the protective of GSI criteria.

Summary of Work Activities - Solid Waste Management Unit G
Former Stanley Tools Site
Fowlerville, Michigan

Prepared for:
Johnson Controls, Inc.

Prepared by:
Earth Tech – Weston
14 January 2004

The Earth Tech-Weston Project Team (ETW) has prepared this submittal on behalf of Johnson Controls, Inc. (JCI) to document the evaluation of previous activities and additional sampling conducted in 2003 in reference to Solid Waste Management Unit (SWMU) G at the former Stanley Tools site (Site) in Fowlerville, Michigan. This work was conducted as part of the Interim Measures (IM) project associated with an Administrative Order on Consent (AOC, Docket No. RCRA-05-2003-0004) dated 20 December 2002.

Previous Activities

Solid Waste Management Unit (SWMU) G was constructed in 1971 to receive chem-fixed sludge from SWMU-A. Originally, SWMU-G was approximately 150 feet by 115 feet and 3 feet deep. The bottom was lined with plastic. Sludge from SWMU-A was mixed with a fixing agent before being placed in SWMU-G. Treated sludge was placed in SWMU-G during 1971 and 1972. Some sludge was removed in 1972, but a significant amount remained until removed by URS in 1994.

Before URS removed the sludge, a composite sludge sample was analyzed for landfill disposal characterization. Sampling was also conducted to delineate the extent of sludge present in SWMU-G. During the 1994 excavation activities, approximately 15,200 square feet of sludge was removed from SWMU-G (the depression) and 1,100 square feet was removed from the area outside the depression. The total weight of the sludge removed was 772 tons.

Confirmation samples were collected from 10 locations (G-1 through G-10) in SWMU-G. The samples were collected on an approximate 45-foot grid using a hand auger. Samples were collected from ground surface to a depth of 6-inches. The samples were analyzed for metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), cyanide, and polychlorinated biphenyls (PCBs). The results are summarized with respect to the protective of groundwater/surface water interface (GSI) criteria in the table below:

Sample ID	VOCs	SVOCs (mg/kg)	/PCBs	Metals/Cyanide (mg/kg)
G1	Okay	Okay	Okay	Cr 77.8
G2	Okay	Okay	Okay	Cr 28.4
G3	Okay	Okay	Okay	CN 0.64; Cr 107
G4	Okay	Okay	Okay	Cr 8
G5	Okay	Okay	Okay	Cr 12.7
G6	Okay	Okay	Okay	Cr 6.1
G7	Okay	Okay	Okay	Cr 21.1; Se 2.0
G8	Okay	Phenanthrene 11; fluoranthene 17	Okay	CN 2.1; Cr 14.2
G9	Okay	Okay	Okay	CN 0.89; Cr 49; Se 0.69
G10	Okay	Okay	Okay	CN 0.83: Cr 24.2

- G7 arsenic is above residential direct contact (18.2 mg/kg)
- Hexavalent chromium was not analyzed, thus total chromium results are compared to Hexavalent chromium
- Silver was not included in the analysis
- Se detection limit to high for G2, G3, G4, G5, G6, and G10
- Mercury detection level is high at G7
- Benzo (a) pyrene exceeds the residential and industrial direct contact
- Highlighted - has been excavated in 2003

Nine additional samples (GB-1 through GB-9) were collected during RCRA Facility Investigation (RFI) portion of the URS work. The samples were analyzed for VOCs, SVOCs, PCBs, metals, and cyanide. The results are summarized with respect to the protective of GSI criteria in the table below:

Sample ID	VOCs	SVOCs	PCBs	Metals/Cyanide (mg/kg)	Detects above GSI criteria	GSI Criteria
GB-1 (3 feet)	NA	NA	Okay	Cr 13.5; Ag 2; CN 4.8	Hg (0.14), Se (1.4)	Hg 0.13 Se 0.41
GB-2 (2 feet)	NA	NA	Okay	Cr 12.5	Ag (1.1), Se (0.57), CN (0.57)	Ag 1.0 Se 0.41 CN 0.39
GB-3 (3 feet)	NA	NA	Okay	Cr 8	Ag (1.4), Hg (0.14), CN(0.69), Se (0.69)	Ag 1.0 Hg 0.13 CN 0.39 Se 0.41
GB-4 (1 foot)	NA	NA	Okay	Cr 54.7; Se 1.1	Hg, Ag, CN	
GB-5 (1 foot)	NA	NA	Okay	Ni 235; Se 2; Cr 506; Zn 426;	Hg, Ag	

Summary of Work Activities - Solid Waste Management Unit G
Former Stanley Tools Site
(continued)

				CN 2; Cu 535		
Sample ID	**VOCs**	**SVOCs**	**PCBs**	**Metals/Cyanide (mg/kg)**	**Detects above GSI criteria**	**GSI Criteria**
GB-6 (1 foot)	NA	NA	Okay	Ni 210; Se 1.4; Cr 420; Zn 675; CN 0.91; Ag 2.7;Hg 0.28		
GB-7 (2 feet)	NA	NA	Okay	Se 1.3; Cr 19.2	CN, Hg	
GB-8 (1 foot)	NA	NA	Okay	Se 0.51; Cr 53.1	Ag, CN	
GB-9 (1 foot)	Okay	Okay	Okay	Se 0.43; Ag 1.6; Cr 17.5	Hg, CN	

Highlighted – area has been excavated in 2003
NA – not analyzed

2003 Field Activities

Excavation activities (part of the mass dig excavation) included the southern portion of SWMU-G. This excavation removed sampling points GB-4 through GP-9 and G-8. Sidewall samples were collected at locations MD29 through MD31 and MD70 through MD72 in the SWMU-G area and analyzed for VOCs, SVOCs, PCBs, Michigan 10 metals, nickel, cyanide, and hex chromium. The results are summarized with respect to the protective of GSI criteria in the table below:

Sample ID	VOCs	SVOCs	PCBs	Metals/Cyanide
MD29	Okay	Okay	Okay	CN 8.3; Se 1.4
MD30	Okay	Okay	Okay	Cr+6 6.4 Se 0.75
MD31	Okay	Okay	Okay	Cr+6 7.6 Se 0.55
MD70	Okay	Okay	Okay	Se 1.8
MD71	Okay	Okay	Okay	Se 0.48
MD72	Okay	Okay	Okay	Cr+6 4.7

Sampling

Samples collected during the three SWMU-G investigations provide good coverage throughout the area. However, analysis of G1 through G10 was only for total chromium while the analytical suite for GB1 through GB8 did not include VOCs and SVOCs. If both total chromium and chromium VI were included in the analytical suite, then the total chromium results can be compared to chromium III criteria, otherwise chromium VI criteria must be used.

Soil samples were collected from the surface soils (0 to 6 inches) at eight locations GA1 through GA8) n the SWMU-G. Each of the samples was analyzed for total chromium and chromium VI, while samples GA5 and GA6 were also analyzed for VOCS and SVOCs. A review of the Chromium data found that all of the detection levels for chromium VI were elevated above the protective of GSI criterion (3.3 mg/kg). The laboratory manager stated that the samples are diluted if there is any color in the sample extract. The samples were collected from an organic-rich wetland area. The total chromium present in the soil samples was at concentrations below the protective of GSI criterion for chromium III, while the VOCs and SVOCs present in the soil samples were below their respective protective of GSI criteria.

Summary

Historical activities conducted at SWMU-G consisted of the removal of 772 tons of sludge/soil and the analysis of 19 soil samples (G1 through G10 and GB1 through GB9). The areas that contained samples G8 and GB4 through GB9 were excavated in 2003. The remaining samples were reviewed to determine if this data was sufficient to document the remedial activities conducted at SWMU-G. This analysis determined that that samples were needed throughout SWMU-G that would be analyzed for total chromium and chromium VI and samples were needed on the southern portion of the SWMU.

Samples were collected from eight locations (GA1 through GA8). Each of samples were analyzed for total chromium and chromium VI, with samples GA5 and GA6 also analyzed for VOCs and SVOCs. The results showed that the total chromium, VOCs and SVOCs detected in the soil samples were at concentrations below the protective of GSI criteria. The detection levels used for each of the chromium VI analyses were elevated above the protective of GSI criterion for chromium VI. The dilution was needed because color was present in the leachate generated from these samples.

Summary of the 2003 Off-Site (East) Field Activities
Former Stanley Tools Site
Fowlerville, Michigan

Prepared for:
Johnson Controls, Inc.

Prepared by:
Earth Tech – Weston
14 January 2004

The Earth Tech-Weston Project Team (ETW) has prepared this submittal on behalf of Johnson Controls, Inc. (JCI) to document the soil and groundwater investigation conducted east of the former Stanley Tools site (Site) in Fowlerville, Michigan. This investigation was conducted to evaluate if a there was a trichloroethene (TCE) source off-site and/or to delineate the eastern extent of TCE identified at the site. The investigation was conducted as part of the Interim Measures (IM) project associated with an Administrative Order on Consent (AOC, Docket No. RCRA-05-2003-0004) dated 20 December 2002.

Sampling Activities and Analytical Results

The off-site investigation consisted the collection of soil and groundwater samples from eight Geoprobe locations (OE01 through OE08). Soils samples were collected continuously from ground surface to the water table at each location. One soil sample from each boring was submitted to the laboratory and analyzed for volatile organic compounds (VOCs). The sample submitted for analysis was either the sample in the boring with the highest photoionization detector reading, discolored soil, or from the unsaturated interval just above saturation. None of the samples were found to contain detectable concentrations of VOCs.

After the soil boring was completed, a groundwater sample was collected from each Geoprobe location. Each sample was collected after groundwater parameters (temperature, conductivity, ORP, and turbidity) stabilized using a peristaltic pump. Two groundwater samples were collected from location OE02 because a sample could be obtained from the perched interval. The samples were analyzed for VOCs.

The results were compared to the residential drinking water, groundwater\surface water interface (GSI), groundwater volatilization to indoor air inhalation, and groundwater contact criteria established by the Michigan Department of Environmental Quality. The only compound to be present in a sample above one of the cleanup criteria was TCE. The residential drinking water criterion (5 ug/l) was exceeded for the groundwater samples collected from location perched OE02 (50 ug/l) and OE03 (9.2 ug/l). Both of these locations were located approximately 15 to 20 feet east of TCE Area A excavation. Note, the deeper sample collected from OE02 did not exceed the drinking water criteria. None of the other criteria were exceeded.

Summary

An investigation was conducted east of the Former Stanley Tool site to evaluate if a TCE source area exists and/or delineate the eastern extent of the TCE plume identified on the site. No off-site source was identified. Groundwater containing TCE was identified in the two locations within 20 feet of the TCE Area A excavation.

Summary of Flood Plain Sampling west of Red Cedar River
Former Stanley Tools Site
Fowlerville, Michigan

Prepared for:
Johnson Controls, Inc.

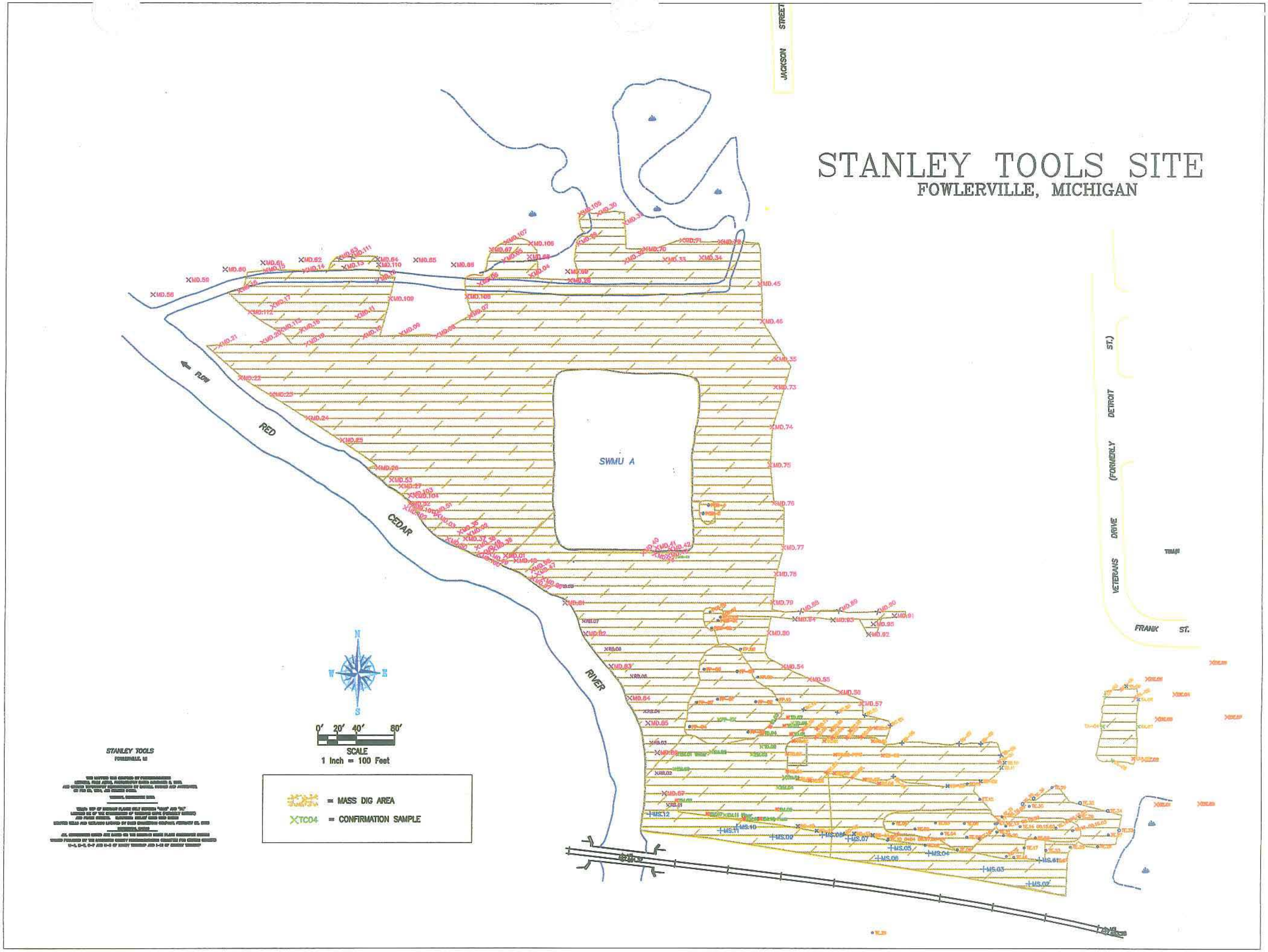
Prepared by:
Earth Tech – Weston
14 January 2004

The Earth Tech-Weston Project Team (ETW) has prepared this submittal on behalf of Johnson Controls, Inc. (JCI) to document the flood plain sampling on the west side of the Red Cedar River. The river acts as the western boundary of the former Stanley Tools site (Site) in Fowlerville, Michigan. The sampling was conducted to allow an evaluation of the flood plain with respect to polychlorinated biphenyls (PCBs) as part of the Interim Measures (IM) project associated with an Administrative Order on Consent (AOC, Docket No. RCRA-05-2003-0004) dated 20 December 2002.

Sampling Activities and Analytical Results

Soil samples were collected from the flood plain west of the Red Cedar River to evaluate if PCBs may have been deposited when the Red Cedar River flooded. Samples were collected at four transects (transects C, D, E, and I) associated with transects used for sediment sampling in the river. Transects were chosen based on the results obtained from the river sediment sampling and analysis. Generally transects are either at transects where sediments contained contaminants or downstream from these locations.

Each flood plain transect consisted of two sample locations. The first sample location was collected within 5 feet of the riverbank with the second sample collected from a low area within 25 feet of the river. The samples were collected from the ground surface and analyzed for PCBs. The results of this analysis showed that PCBs that none of the samples contained PCBs above the reporting limit.

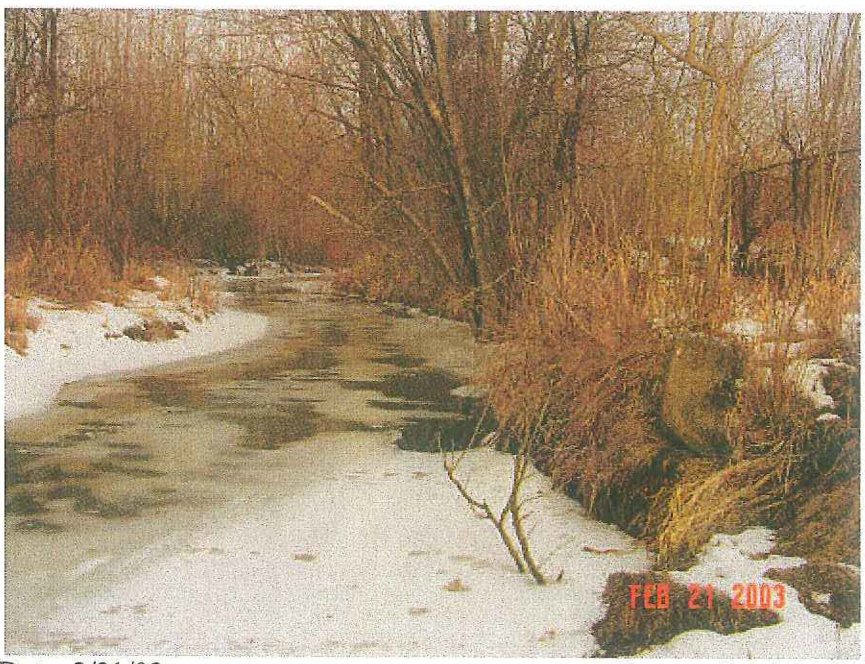

STANLEY TOOLS SITE
FOWLERVILLE, MICHIGAN
JACKSON STREET
VETERANS DRIVE (FORMERLY DETROIT ST.)
FRANK ST.
RED CEDAR RIVER
FLOW
SWMU A
N
S
E
W
0' 20' 40' 80'
SCALE
1 Inch = 100 Feet
= MASS DIG AREA
TC04 = CONFIRMATION SAMPLE
STANLEY TOOLS

B

Appendix B

Photo Log of Interim Measures Activities

Date: 7/25/03 Former Stanley Tool
Northwest view of Kerosene/PCB Area – Benching to water table.



Date: 2/21/03 Former Stanley Tool
Red Cedar River

Date: 2/21/03 Former Stanley Tool

Site before excavation activities started – looking west.

Date: 10/8/03 Former Stanley Tool

Site before topsoil was added.

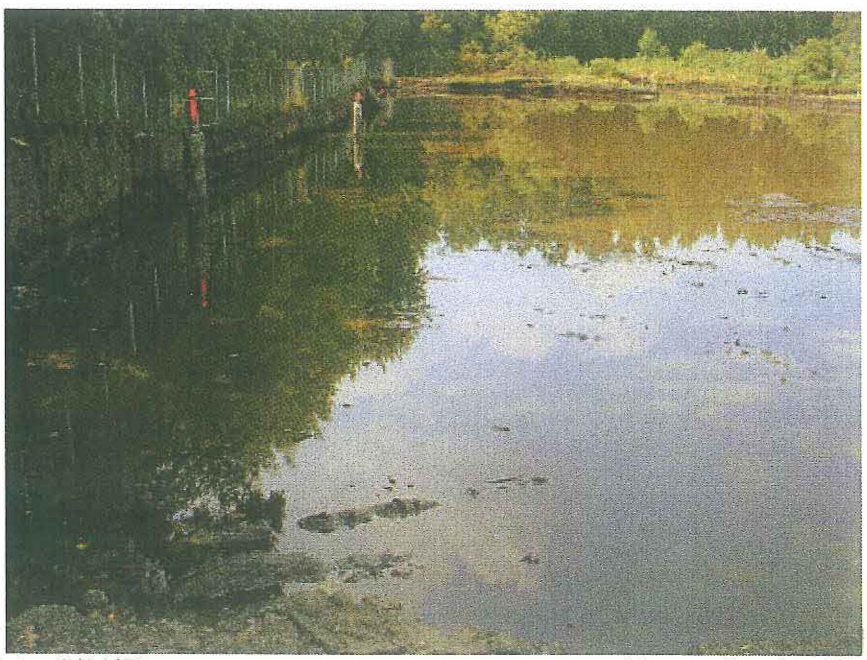
Date: 7/24/03 Former Stanley Tool

Excavation in TPH area. Final excavation extended to the water table.

Date: 10/8/03 Former Stanley Tool

South Drain prior to excavation.

Date: 8/19/03 Former Stanley Tool
Fire Loop Excavation



Date: 8/14/03 Former Stanley Tool
Excavation west of SWMU-A.

Date: 10/19/03 Former Stanley Tool
Excavated South Drain.

Date: 10/23/03 Former Stanley Tool
South Drain excavation being back filled.

C

Appendix C

Laboratory Reports /Chain of Custody Reports

C1 – Metals Impacted Material
C2 – TCE Impacted Material
C3 – Imported Fill Material
C4 – Air Monitoring Total Suspended Particulates (TSP)

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Lab Project Number: 9245557
Client Project ID: C818

Solid results are reported on a wet weight basis

Lab Sample No: 923046726 | Project Sample Number: 9245557-001 | Date Collected: 06/11/03 13:30
Client Sample ID: WC-001 | Matrix: Soil | Date Received: 06/12/03 10:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Bioassay									
pH	Method: EPA 9045								
pH	7.84	units		1.0	06/16/03	JGJ			
Metals									
Trace ICP Metals, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010								
Arsenic	ND	mg/l	0.025	1.0	06/15/03 19:18	LBG	7440-38-2		
Barium	0.56	mg/l	0.025	1.0	06/15/03 19:18	LBG	7440-39-3		
Cadmium	ND	mg/l	0.0050	1.0	06/15/03 19:18	LBG	7440-43-9		
Chromium	0.48	mg/l	0.010	1.0	06/15/03 19:18	LBG	7440-47-3		
Lead	ND	mg/l	0.015	1.0	06/15/03 19:18	LBG	7439-92-1		
Nickel	3.9	mg/l	0.025	1.0	06/15/03 19:18	LBG	7440-02-0		
Selenium	ND	mg/l	0.025	1.0	06/15/03 19:18	LBG	7782-49-2		
Silver	ND	mg/l	0.010	1.0	06/15/03 19:18	LBG	7440-22-4		
Zinc	7.5	mg/l	0.050	1.0	06/15/03 19:18	LBG	7440-66-6		
Date Digested	06/14/03				06/14/03				
Mercury, CVAAS, TCLP Leachate	Method: EPA 7470								
Date Digested	06/13/03				06/13/03				
Mercury, CVAAS, TCLP Leachate	Method: EPA 7470								
Mercury	ND	mg/l	0.00020	1.0	06/16/03	LBG	7439-97-6		
Wet Chemistry									
Flash Point, Closed Cup	Method: EPA 1010								
Flash Point	no flash at 140 degrees F				06/19/03	WCB			
Total Percent Solids	Method: EPA 160.3								
Percent Solids	82.2	%		1.0	06/20/03	KLH1			
GC/MS Semivolatiles									
Semivolatile Organics, TCLP	Prep/Method: EPA 3510 / EPA 8270								
1,4-Dichlorobenzene	ND	mg/l	0.75	1.0	06/17/03 18:36	BET	106-46-7		
2,4-Dinitrotoluene	ND	mg/l	0.013	1.0	06/17/03 18:36	BET	121-14-2		
Hexachloro-1,3-butadiene	ND	mg/l	0.050	1.0	06/17/03 18:36	BET	87-68-3		
Hexachlorobenzene	ND	mg/l	0.013	1.0	06/17/03 18:36	BET	118-74-1		
Hexachloroethane	ND	mg/l	0.30	1.0	06/17/03 18:36	BET	67-72-1		
2-Methylphenol (o-Cresol)	ND	mg/l	20.	1.0	06/17/03 18:36	BET	95-48-7		

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Lab Project Number: 9245557
Client Project ID: C818

Lab Sample No: 923046726 | Project Sample Number: 9245557-001 | Date Collected: 06/11/03 13:30
Client Sample ID: WC-001 | Matrix: Soil | Date Received: 06/12/03 10:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
3&4-Methylphenol	ND	mg/l	20.	1.0	06/17/03 18:36	BET			
Nitrobenzene	ND	mg/l	0.20	1.0	06/17/03 18:36	BET	98-95-3		
Pentachlorophenol	ND	mg/l	10.	1.0	06/17/03 18:36	BET	87-86-5		
Pyridine	ND	mg/l	0.50	1.0	06/17/03 18:36	BET	110-86-1		
2,4,5-Trichlorophenol	ND	mg/l	40.	1.0	06/17/03 18:36	BET	95-95-4		
2,4,6-Trichlorophenol	ND	mg/l	0.20	1.0	06/17/03 18:36	BET	88-06-2		
Nitrobenzene-d5 (S)	59	%		1.0	06/17/03 18:36	BET	4165-60-0		
2-Fluorobiphenyl (S)	56	%		1.0	06/17/03 18:36	BET	321-60-8		
Terphenyl-d14 (S)	74	%		1.0	06/17/03 18:36	BET	1718-51-0		
Phenol-d5 (S)	9	%		1.0	06/17/03 18:36	BET	4165-62-2	1	
2-Fluorophenol (S)	14	%		1.0	06/17/03 18:36	BET	367-12-4		
2,4,6-Tribromophenol (S)	59	%		1.0	06/17/03 18:36	BET			
Date Extracted	06/16/03				06/16/03				
GC Semivolatiles									
Organochlorine PCBs	Prep/Method: EPA 3550 / EPA 8082								
PCB-1016 (Aroclor 1016)	ND	ug/kg	33.	1.0	06/19/03	CBE	12674-11-2		
PCB-1221 (Aroclor 1221)	ND	ug/kg	33.	1.0	06/19/03	CBE	11104-28-2		
PCB-1232 (Aroclor 1232)	ND	ug/kg	33.	1.0	06/19/03	CBE	11141-16-5		
PCB-1242 (Aroclor 1242)	ND	ug/kg	33.	1.0	06/19/03	CBE	53469-21-9		
PCB-1248 (Aroclor 1248)	160	ug/kg	33.	1.0	06/19/03	CBE	12672-29-6		
PCB-1254 (Aroclor 1254)	ND	ug/kg	33.	1.0	06/19/03	CBE	11097-69-1		
PCB-1260 (Aroclor 1260)	ND	ug/kg	33.	1.0	06/19/03	CBE	11096-82-5		
Decachlorobiphenyl (S)	114	%		1.0	06/19/03	CBE	2051-24-3		
Date Extracted	06/18/03				06/18/03				
GC/MS Volatiles									
Volatile Organics, TCLP Leach.	Method: EPA 8260								
Benzene	ND	mg/l	0.010	1.0	06/17/03 15:42	RWS	71-43-2		
2-Butanone (MEK)	ND	mg/l	0.010	1.0	06/17/03 15:42	RWS	78-93-3		
Carbon tetrachloride	ND	mg/l	0.010	1.0	06/17/03 15:42	RWS	56-23-5		
Chlorobenzene	ND	mg/l	0.010	1.0	06/17/03 15:42	RWS	108-90-7		
Chloroform	ND	mg/l	0.010	1.0	06/17/03 15:42	RWS	67-66-3		
1,2-Dichloroethane	ND	mg/l	0.010	1.0	06/17/03 15:42	RWS	107-06-2		
1,1-Dichloroethene	ND	mg/l	0.010	1.0	06/17/03 15:42	RWS	75-35-4		
Tetrachloroethene	ND	mg/l	0.010	1.0	06/17/03 15:42	RWS	127-18-4		
Trichloroethene	ND	mg/l	0.010	1.0	06/17/03 15:42	RWS	79-01-6		
Vinyl chloride	ND	mg/l	0.010	1.0	06/17/03 15:42	RWS	75-01-4		
Toluene-d8 (S)	83	%		1.0	06/17/03 15:42	RWS	2037-26-5		

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Lab Project Number: 9245557
Client Project ID: C818

Lab Sample No: 923046726 | Project Sample Number: 9245557-001 | Date Collected: 06/11/03 13:30
Client Sample ID: WC-001 | Matrix: Soil | Date Received: 06/12/03 10:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
4-Bromofluorobenzene (S)	81	%		1.0	06/17/03 15:42	RWS	460-00-4		
Dibromofluoromethane (S)	114	%		1.0	06/17/03 15:42	RWS	1868-53-7		
1,2-Dichloroethane-d4 (S)	101	%		1.0	06/17/03 15:42	RWS	17060-07-0		

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Lab Project Number: 5028471
Client Project ID: C818

Solid results are reported on a wet weight basis

Lab Sample No: 502565393	Project Sample Number: 5028471-001	Date Collected: 07/01/03 16:10
Client Sample ID: SSM-001	Matrix: Soil	Date Received: 07/02/03 10:40

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	07/02/03 16:20			07/02/03 16:20				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Chromium	0.627	mg/l	0.0500	07/07/03 13:05	FRW	7440-47-3		
Date Digested	07/03/03			07/03/03				

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Lab Project Number: 5028570
Client Project ID: C818

Solid results are reported on a wet weight basis

Lab Sample No: 502579535 Project Sample Number: 5028570-001 Date Collected: 07/08/03 08:15
Client Sample ID: SSM-002 Matrix: Soil Date Received: 07/09/03 09:44

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	07/13/03 14:00			07/13/03 14:00				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Chromium	0.473	mg/l	0.0500	07/15/03 18:24	FRW	7440-47-3		
Date Digested	07/14/03			07/14/03				

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Lab Project Number: 5028570
Client Project ID: C818

Lab Sample No: 502579543 | Project Sample Number: 5028570-002 | Date Collected: 07/08/03 08:17
Client Sample ID: SSM-003 | Matrix: Soil | Date Received: 07/09/03 09:44

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	07/13/03 14:00			07/13/03 14:00				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Chromium	0.329	mg/l	0.0500	07/15/03 18:30	FRW	7440-47-3		
Date Digested	07/14/03			07/14/03				

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Lab Project Number: 5028570
Client Project ID: C818

Lab Sample No: 502579550 | Project Sample Number: 5028570-003 | Date Collected: 07/08/03 08:19
Client Sample ID: SSM-004 | Matrix: Soil | Date Received: 07/09/03 09:44

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	07/13/03 14:00			07/13/03 14:00				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Chromium	0.119	mg/l	0.0500	07/15/03 18:37	FRW	7440-47-3		
Date Digested	07/14/03			07/14/03				

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Lab Project Number: 5029113
Client Project ID: C818

Solid results are reported on a wet weight basis

Lab Sample No: 502641426 Project Sample Number: 5029113-001 Date Collected: 07/29/03 16:48
Client Sample ID: SSM-005 Matrix: Soil Date Received: 07/31/03 10:45

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	08/04/03 17:25			08/04/03 17:25				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Chromium	ND	mg/l	0.0500	08/06/03 17:25	FRW	7440-47-3		
Date Digested	08/05/03			08/05/03				

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Lab Project Number: 5029113
Client Project ID: C818

Lab Sample No: 502641434 Project Sample Number: 5029113-002 Date Collected: 07/29/03 17:02
Client Sample ID: SSM-006 Matrix: Soil Date Received: 07/31/03 10:45

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	08/04/03 17:25			08/04/03 17:25				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Chromium	ND	mg/l	0.0500	08/06/03 17:42	FRW	7440-47-3		
Date Digested	08/05/03			08/05/03				

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Lab Project Number: 5029113
Client Project ID: C818

Lab Sample No: 502641442
Client Sample ID: SSM-007

Project Sample Number: 5029113-003
Matrix: Soil

Date Collected: 07/29/03 17:06
Date Received: 07/31/03 10:45

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	08/04/03 17:25			08/04/03 17:25				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Chromium	ND	mg/l	0.0500	08/06/03 17:47	FRW	7440-47-3		
Date Digested	08/05/03			08/05/03				

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Lab Project Number: 9248938
Client Project ID: Entact-IL/5029325

Solid results are reported on a wet weight basis

Lab Sample No: 502669773 Project Sample Number: 9248938-001 Date Collected: 08/11/03 08:45
Client Sample ID: SSM-008 Matrix: Soil Date Received: 08/12/03 10:14

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Metals									
Trace ICP Metals, TCLP Leach.	Method: EPA 6010								
Date Digested	08/15/03				08/15/03				
Trace ICP Metals, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010								
Chromium	ND	mg/l	0.010	1.0	08/18/03 12:28	LBG	7440-47-3		
Date Digested	08/18/03				08/18/03				

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Lab Project Number: 9248938
Client Project ID: Entact-IL/5029325

Lab Sample No: 502669781 | Project Sample Number: 9248938-002 | Date Collected: 08/11/03 08:48
Client Sample ID: SSM-009 | Matrix: Soil | Date Received: 08/12/03 10:14

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Metals									
Trace ICP Metals, TCLP Leach.	Method: EPA 6010								
Date Digested	08/15/03				08/15/03				
Trace ICP Metals, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010								
Chromium	0.017	mg/l	0.010	1.0	08/18/03 12:33	LBG	7440-47-3		
Date Digested	08/18/03				08/18/03				

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Lab Project Number: 5029669
Client Project ID: C818

Solid results are reported on a wet weight basis

Lab Sample No: 502714249 | Project Sample Number: 5029669-001 | Date Collected: 08/25/03 16:43
Client Sample ID: SSM-010 | Matrix: Soil | Date Received: 08/27/03 11:22

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	08/28/03 15:15			08/28/03 15:15				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Chromium	ND	mg/l	0.0100	09/02/03 21:57	FRW	7440-47-3		
Date Digested	08/29/03			08/29/03				

Lab Sample No: 502714272 | Project Sample Number: 5029669-002 | Date Collected: 08/25/03 16:45
Client Sample ID: SSM-011 | Matrix: Soil | Date Received: 08/27/03 11:22

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	08/28/03 15:15			08/28/03 15:15				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Chromium	0.0222	mg/l	0.0100	09/02/03 22:14	FRW	7440-47-3		
Date Digested	08/29/03			08/29/03				

Lab Sample No: 502714280 | Project Sample Number: 5029669-003 | Date Collected: 08/25/03 16:48
Client Sample ID: SSM-012 | Matrix: Soil | Date Received: 08/27/03 11:22

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	08/28/03 15:15			08/28/03 15:15				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Chromium	0.0154	mg/l	0.0100	09/02/03 22:20	FRW	7440-47-3		
Date Digested	08/29/03			08/29/03				

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 5029669
Client Project ID: C818

Lab Sample No: 502714298 Project Sample Number: 5029669-004 Date Collected: 08/25/03 16:51
Client Sample ID: SSM-013 Matrix: Soil Date Received: 08/27/03 11:22

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	08/28/03 15:15			08/28/03 15:15				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Chromium	ND	mg/l	0.0100	09/02/03 22:25	FRW	7440-47-3		
Date Digested	08/29/03			08/29/03				

Date: 09/03/03

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7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5029947
Client Project ID: C818

Solid results are reported on a wet weight basis

Lab Sample No: 502746522
Client Sample ID: SSM-014

Project Sample Number: 5029947-001
Matrix: Soil

Date Collected: 09/04/03 16:19
Date Received: 09/09/03 09:53

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	09/10/03 15:38			09/10/03 15:38				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Chromium	ND	mg/l	0.0100	09/12/03 11:56	FRW	7440-47-3		
Date Digested	09/11/03			09/11/03				

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Fax: 317.872.6189

Lab Project Number: 5029947
Client Project ID: C818

Lab Sample No: 502746530 Project Sample Number: 5029947-002 Date Collected: 09/04/03 16:21
Client Sample ID: SSM-015 Matrix: Soil Date Received: 09/09/03 09:53

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	09/10/03 15:38			09/10/03 15:38				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Chromium	0.0191	mg/l	0.0100	09/12/03 12:02	FRW	7440-47-3		
Date Digested	09/11/03			09/11/03				

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Fax: 317.872.6189

Lab Project Number: 5029947
Client Project ID: C818

Lab Sample No: 502746555 | Project Sample Number: 5029947-003 | Date Collected: 09/04/03 16:22
Client Sample ID: SSM-016 | Matrix: Soil | Date Received: 09/09/03 09:53

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	09/10/03 15:38			09/10/03 15:38				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Chromium	ND	mg/l	0.0100	09/12/03 12:07	FRW	7440-47-3		
Date Digested	09/11/03			09/11/03				

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Lab Project Number: 5029947
Client Project ID: C818

Lab Sample No: 502746563 Project Sample Number: 5029947-004 Date Collected: 09/04/03 16:24
Client Sample ID: SSM-017 Matrix: Soil Date Received: 09/09/03 09:53

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	09/10/03 15:38			09/10/03 15:38				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Chromium	ND	mg/l	0.0100	09/12/03 12:24	FRW	7440-47-3		
Date Digested	09/11/03			09/11/03				

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Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5029947
Client Project ID: C818

Lab Sample No: 502746589   Project Sample Number: 5029947-005   Date Collected: 09/04/03 16:25
Client Sample ID: SSM-018   Matrix: Soil   Date Received: 09/09/03 09:53

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	09/10/03 15:38			09/10/03 15:38				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Chromium	ND	mg/l	0.0100	09/12/03 12:30	FRW	7440-47-3		
Date Digested	09/11/03			09/11/03				

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7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5029947
Client Project ID: C818

Lab Sample No: 502746605 Project Sample Number: 5029947-006 Date Collected: 09/08/03 09:23
Client Sample ID: SSM-019 Matrix: Soil Date Received: 09/09/03 09:53

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	09/10/03 15:38			09/10/03 15:38				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Chromium	0.0235	mg/l	0.0100	09/12/03 12:36	FRW	7440-47-3		
Date Digested	09/11/03			09/11/03				

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Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5029947
Client Project ID: C818

Lab Sample No: 502746613
Client Sample ID: SSM-020

Project Sample Number: 5029947-007
Matrix: Soil

Date Collected: 09/08/03 09:25
Date Received: 09/09/03 09:53

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	09/10/03 15:38			09/10/03 15:38				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Chromium	ND	mg/l	0.0100	09/12/03 12:55	FRW	7440-47-3		
Date Digested	09/11/03			09/11/03				

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Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5029947
Client Project ID: C818

Lab Sample No: 502746639 Project Sample Number: 5029947-008 Date Collected: 09/08/03 09:26
Client Sample ID: SSM-021 Matrix: Soil Date Received: 09/09/03 09:53

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	09/10/03 15:38			09/10/03 15:38				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Chromium	ND	mg/l	0.0100	09/12/03 12:00	FRW	7440-47-3		
Date Digested	09/11/03			09/11/03				

REPORT OF LABORATORY ANALYSIS

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Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5029947
Client Project ID: C818

Lab Sample No: 502746654 Project Sample Number: 5029947-009 Date Collected: 09/08/03 09:28
Client Sample ID: SSM-022 Matrix: Soil Date Received: 09/09/03 09:53

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	09/10/03 15:38			09/10/03 15:38				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Chromium	0.0178	mg/l	0.0100	09/12/03 12:06	FRW	7440-47-3		
Date Digested	09/11/03			09/11/03				

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Lab Project Number: 5029947
Client Project ID: C818

Lab Sample No: 502746670 Project Sample Number: 5029947-010 Date Collected: 09/08/03 09:29
Client Sample ID: SSM-023 Matrix: Soil Date Received: 09/09/03 09:53

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	09/10/03 15:38			09/10/03 15:38				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Chromium	0.0121	mg/l	0.0100	09/12/03 12:12	FRW	7440-47-3		
Date Digested	09/11/03			09/11/03				

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Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5029947
Client Project ID: C818

Lab Sample No: 502746688 | Project Sample Number: 5029947-011 | Date Collected: 09/08/03 09:30
Client Sample ID: SSM-024 | Matrix: Soil | Date Received: 09/09/03 09:53

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	09/10/03 15:38			09/10/03 15:38				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Chromium	ND	mg/l	0.0100	09/12/03 13:31	FRW	7440-47-3		
Date Digested	09/11/03			09/11/03				

REPORT OF LABORATORY ANALYSIS

ENTACT

1360 N. Wood Dale Rd. Suite A
Wood Dale, Illinois 60191
Ph. 630/616-2100 Fax 630/616-9203

CHAIN OF CUSTODY

Sampler: R.REGESTER Job #: C818

ENTACT Contact: R.REGESTER Date: 6.11.03

Turnaround Time Requested

24 Hour ☐ 48 Hour ☐ 3 Day ☐ Normal ☐ Other ☒ 5 day

Sample No.	Matrix	Composite or Grab	Description/Remarks	Preservative	Analysis
WC.001	SOIL	GRAB	#4 jars Waste Characterization - Chromium 1330 6.11.03	Ice	A-K

Samples Relinquished By: Rhonda Regester 6.11.03 Date

Samples Received By: ____ Date

Samples Relinquished By: ____ Date

Samples Received By: ____ Date

Samples Relinquished By: ____ Date

ANALYSIS

A= TCLP-VOCs

B= TCLP SVOC

C= TCLP TCE

D= TCLP - Michigan Metals

E= Total - PCBs

F= Reactive Cyanide

G= Reactive Sulfide

H= pH

I= percent solids

J= flash point

K= specific gravity

Condition of Sample Upon Receipt:

Bottles Intact? Yes / No	Volatiles Free of Headspace? Yes / No	COC Seals Present and Intact? Yes / No

Distribution:

Original - To Customer w/ Final Report
2nd Copy - To Job File
3rd Copy - To Lab

CHAIN OF STODY

ENTACT

1360 N. Wood Dale Rd. Suite A
Wood Dale, Illinois 60191
Ph. 630/616-2100 Fax 630/616-9203

Sampler: R. Regester Job #: C 818

ENTACT Contact: R. Regester Date: 07-01-03

Turnaround Time Requested

24 Hour ☒ 48 Hour ☐ 3 Day ☐ Normal ☐ Other ☐ ______

Sample No.	Matrix	Composite or Grab	Description/Remarks	Preservative	Analysis
SSM-001	Soil	Composite	S. Chromium Area 07-01-03 @ 1610	ICE	A ~~& B~~ KS

Samples Relinquished By: Kurt Sutteff 07-01-03 Date

Samples Received By: ______ Date

Samples Relinquished By: ______ Date

Samples Received By: ______ Date

Samples Relinquished By: ______ Date

ANALYSIS

A= TCLP Cr F=

B= ~~Total PCB's~~ KS G=

C= H=

D= I=

E= J=

Condition of Sample Upon Receipt:

Bottles Intact? Yes / No	Volatiles Free of Headspace? Yes / No	COC Seals Present and Intact? Yes / No

Distribution:

Original - To Customer w/ Final Report
2nd Copy - To Job File

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Page: 1 **of** 1

Section A — Required Client Information:

Company	ENTACT
Address	425 West Frank Street, Fowlerville, Mi 48836
Phone	517-223-7633
Fax	517-223-7636

Section B — Required Client Information:

Report To:	Rhonda Regester
Copy To:	Fowlerville
Invoice To:	Fowlerville
P.O.	
Project Name:	Stanley Tool
Project Number:	C-818

Client Information (Check quote/contract):

Requested Due Date: 07-14-03 | *TAT: 5 day

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.
Turn Around Time (TAT) in calendar days.

Section C — To Be Completed by Pace Analytical and Client

Quote Reference:	
Project Manager:	
Project #:	
Profile #:	
Requested Analysis:	TCLP Cr

corrected via phone (RK) 7-9-03

Section D — Required Client Information:

SAMPLE ID — One character per box. (A–Z, 0–9 / .–) Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — WATER WT, SOIL SL, OIL OL, WIPE WP, AIR AR, TISSUE TS, OTHER OT

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED mm/dd/yy	TIME COLLECTED hh:mm a/p	# Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	TCLP Cr	Remarks / Lab ID
1	SSM-002	SL	7-8-03	0815		X								X	
2	SSM-003	SL	7-8-03	0817		X								X	
3	SSM-004	SL	7-8-03	0819		X								X	
4															
5															
6															
7															
8															
9															
10															
11															
12															

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS
Fed Ex		07-08-03	1

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	Kurt Sutliff	07-08-03	0900			

SAMPLE CONDITION

Temp in °C	
Received on Ice	Y/N
Sealed Cooler	Y/N
Samples Intact	Y/N

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: K. Sutliff

SIGNATURE of SAMPLER: Kurt Sutliff

DATE Signed: (MM / DD / YY) 7-8-03

SEE REVERSE SIDE FOR INSTRUCTIONS

Form COC01 Rev 0402

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Page: 1 of 1

Required Client Information: Section A

Company	Entact
Address	425 W. Frank St. Fowlerville, Mi. 48836
Phone	517-223-7633
Fax	517-223-7636

Required Client Information: Section B

Report To:	Rhonda Regester
Copy To:	Entact - Fowlerville
Invoice To:	Entact - Fowlerville
P.O.	
Project Name:	Stanley Tool
Project Number:	C-818

Client Information (Check quote/contract):

Requested Due Date:	*TAT:
7-31-03	24 hr. TAT

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.

Turn Around Time (TAT) in calendar days.

To Be Completed by Pace Analytical and Client Section C

Quote Reference:	
Project Manager:	
Project #:	
Profile #:	

Requested Analysis: TCLP Cr

Section D Required Client Information:

SAMPLE ID — One character per box. (A–Z, 0–9 / .–) Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — WATER WT, SOIL SL, OIL OL, WIPE WP, AIR AR, TISSUE TS, OTHER OT

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED mm/dd/yy	TIME COLLECTED hh:mm a/p	# Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	TCLP Cr	Remarks / Lab ID
1	SSM-005	SL	7-29-03	1648	1	X								X	
2	SSM-006	SL	7-29-03	1702	1	X								X	
3	SSM-007	SL	7-29-03	1706	1	X								X	
4															
5															
6															
7															
8															
9															
10															
11															
12															

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS	ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Federal Express	839674517330	7-30-03	1		Kurt Sutliff	7-29-03	1730			

SAMPLE CONDITION

Temp in °C	
Received on Ice	Y/N
Sealed Cooler	Y/N
Samples Intact	Y/N

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kurt Sutliff

SIGNATURE of SAMPLER: Kurt Sutliff

DATE Signed: (MM / DD / YY) 07-29-03

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Required Client Information: Section A

Company	Entact.
Address	425 W. Frank St.
	Fowlerville, Mi. 48836
Phone	517-223-7633
Fax	517-223-7636

Required Client Information: Section B

Report To:	Rhonda Regester
Copy To:	Entact - Fowlerville
Invoice To:	SAME
P.O.	
Project Name:	Stanley Tool
Project Number:	C-818

Client Information (Check quote/contract):

Requested Due Date: 8-15-03 | *TAT: 3 day

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.

Turn Around Time (TAT) in calendar days.

To Be Completed by Pace Analytical and Client — Section C

Quote Reference:	
Project Manager:	
Project #:	
Profile #:	
Requested Analysis:	TCLP-Cr, ~~TCLP-RS~~

Section D — Required Client Information:

SAMPLE ID

One character per box. (A–Z, 0–9 / .–) Sample IDs MUST BE UNIQUE

Valid Matrix Codes MATRIX	CODE
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED mm / dd / yy	TIME COLLECTED hh:mm a/p	# Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	TCLP-Cr	~~TCLP-RS~~	Remarks / Lab ID
1	SSM-008	SL	08-11-03	0845		X								X		
2	SSM-009	SL	08-11-03	0848		X								X		
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS
Federal Express	841756844463	08-11-03	1

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	Kurt Sutliff HSC-QA/QC	8-11-03	0900			

SAMPLE CONDITION

Temp in °C	
Received on Ice	Y/N
Sealed Cooler	Y/N
Samples Intact	Y/N

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kurt Sutliff

SIGNATURE of SAMPLER: Kurt Sutliff

DATE Signed: (MM / DD / YY) 08-11-03

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Page: 1 of 1

Section A Required Client Information:

Company	Entact
Address	125 W. Frank St. Fowlerville, Mi. 48836
Phone	517-223-7633
Fax	517-223-7636

Section B Required Client Information:

Report To:	Rhonda Carpenter
Copy To:	Entact Fowlerville
Invoice To:	SAme
P.O.	
Project Name:	Stanley tool
Project Number:	C-815

Client Information (Check quote/contract):

Requested Due Date: 09-01-03 *TAT: 5day

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.

Turn Around Time (TAT) in calendar days.

Section C To Be Completed by Pace Analytical and Client

Quote Reference:	
Project Manager:	
Project #:	
Profile #:	

Section D Required Client Information:

SAMPLE ID
One character per box. (A–Z, 0–9 / .–)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes MATRIX	CODE
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

Requested Analysis: TCLP Cr

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED mm / dd / yy	TIME COLLECTED hh:mm a/p	# Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	TCLP Cr	Remarks / Lab ID
1	SSM-010	SL	08-25-03	1643										X	
2	SSM-011	SL	8-25-03	1645										X	
3	SSM-012	SL	8-25-03	1648										X	
4	SSM-013	SL	8-25-03	1651										X	
5															
6															
7															
8															
9															
10															
11															
12															

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS	ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Federal Express	841756844428	08-26-03	1		Kurt Sutliff	08-26-03	1000			

SAMPLE CONDITION

Temp in °C	
Received on Ice	Y/N
Sealed Cooler	Y/N
Intact	Y/N

SAMPLE NOTES

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kurt Sutliff

SIGNATURE of SAMPLER: Kurt Sutliff

DATE Signed: (MM / DD / YY) 08-25-03

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Page: 1 **of** 1

Section A
Required Client Information:

Company	Entact
Address	4?5 W. Frank St. Fowlerville, Mi 48836
Phone	517 223-7633
Fax	517 223 7636

Section B
Required Client Information:

Report To:	Shanda Register
Copy To:	Entact - Fowlerville
Invoice To:	SAME
P.O.	
Project Name:	Stanley Tool
Project Number:	C-818

Client Information (Check quote/contract):

Requested Due Date:	*TAT:
9-16-03	5 day TAT

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.

Turn Around Time (TAT) in calendar days.

Section C
To Be Completed by Pace Analytical and Client

Quote Reference:	
Project Manager:	
Project #:	
Profile #:	

Requested Analysis: TCLP Cr

Section D
Required Client Information:

SAMPLE ID
One character per box.
(A-Z, 0-9 / .-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — WATER WT, SOIL SL, OIL OL, WIPE WP, AIR AR, TISSUE TS, OTHER OT

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED mm / dd / yy	TIME COLLECTED hh:mm a/p	# Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	TCLP Cr	Remarks / Lab ID
1	SSM-014	SL	09 04 03	1619		X								X	
2	SSM-015	SL	09 04 03	1621		X								X	
3	SSM-016	SL	09 04 03	1622		X								X	
4	SSM-017	SL	09 04 03	1624		X								X	
5	SSM-018	SL	09 04 03	1625		X								X	
6	SSM-019	SL	9-08-03	0923		X								X	
7	SSM-020	SL	9 08 03	0925		X								X	
8	SSM-021	SL	9-08-03	0926		X								X	
9	SSM-022	SL	9 08 03	0928		X								X	
10	SSM-023	SL	9 08 03	0929		X								X	
11	SSM-024	SL	9 08 03	0930		X								X	
12															

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS
Federal Express	841756844370	09 08 03	1

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	Kurt Sutliff	9-8-03	1430			

SAMPLE CONDITION

Temp in °C	
Received on Ice	Y/N
Sealed Cooler	Y/N
Samples Intact	Y/N

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

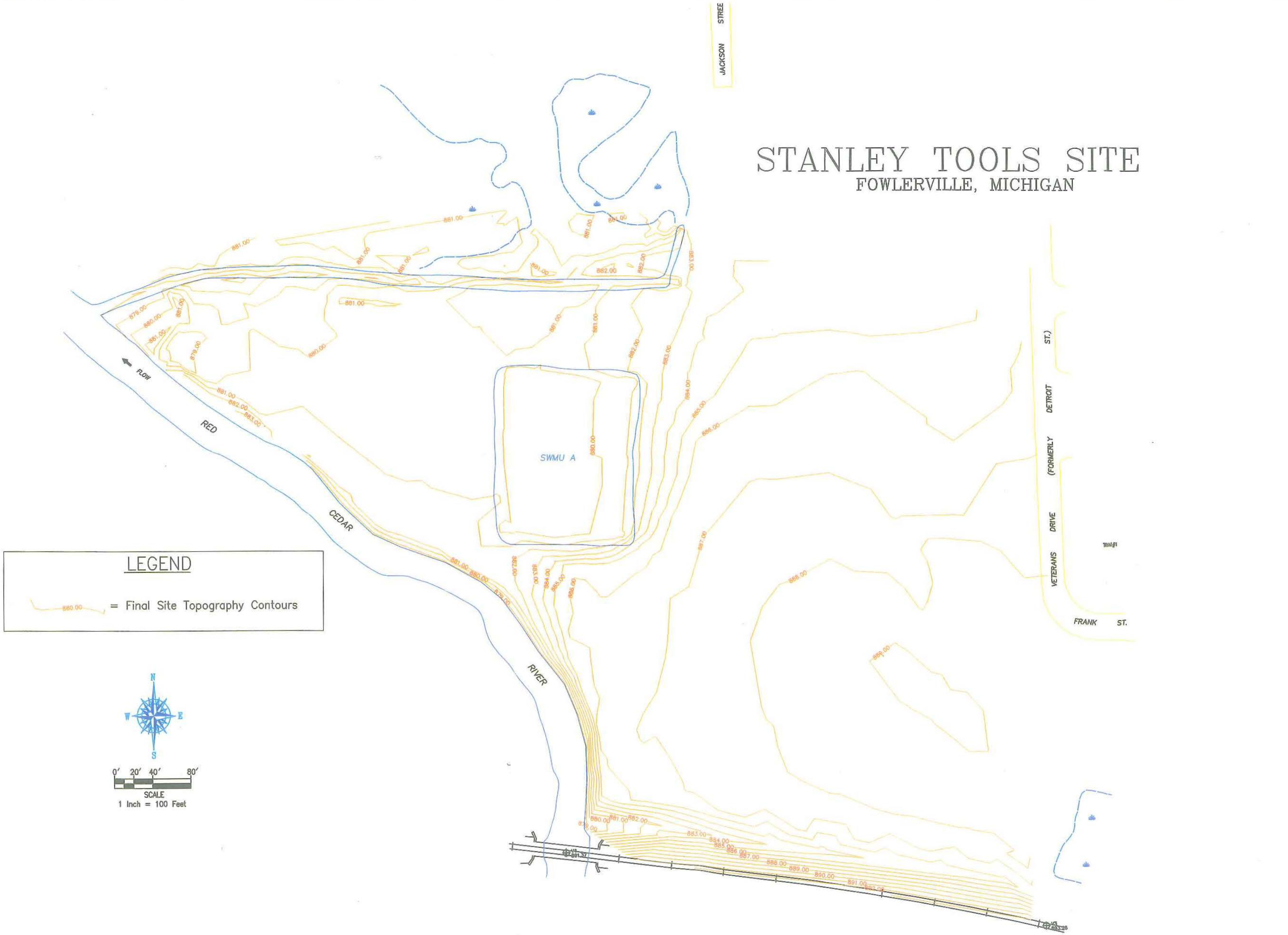
PRINT Name of SAMPLER: Kurt Sutliff

SIGNATURE of SAMPLER: Kurt Sutliff

DATE Signed: (MM / DD / YY) 9 5 03

SEE REVERSE SIDE FOR INSTRUCTIONS

Form COC01 Rev 0402



Johnson Controls, Inc.
Former Stanley Tool Site
Fowlerville, Michigan

Final Site Topography

DATE: Dec. 16, 2003

PROJECT NUMBER: C818

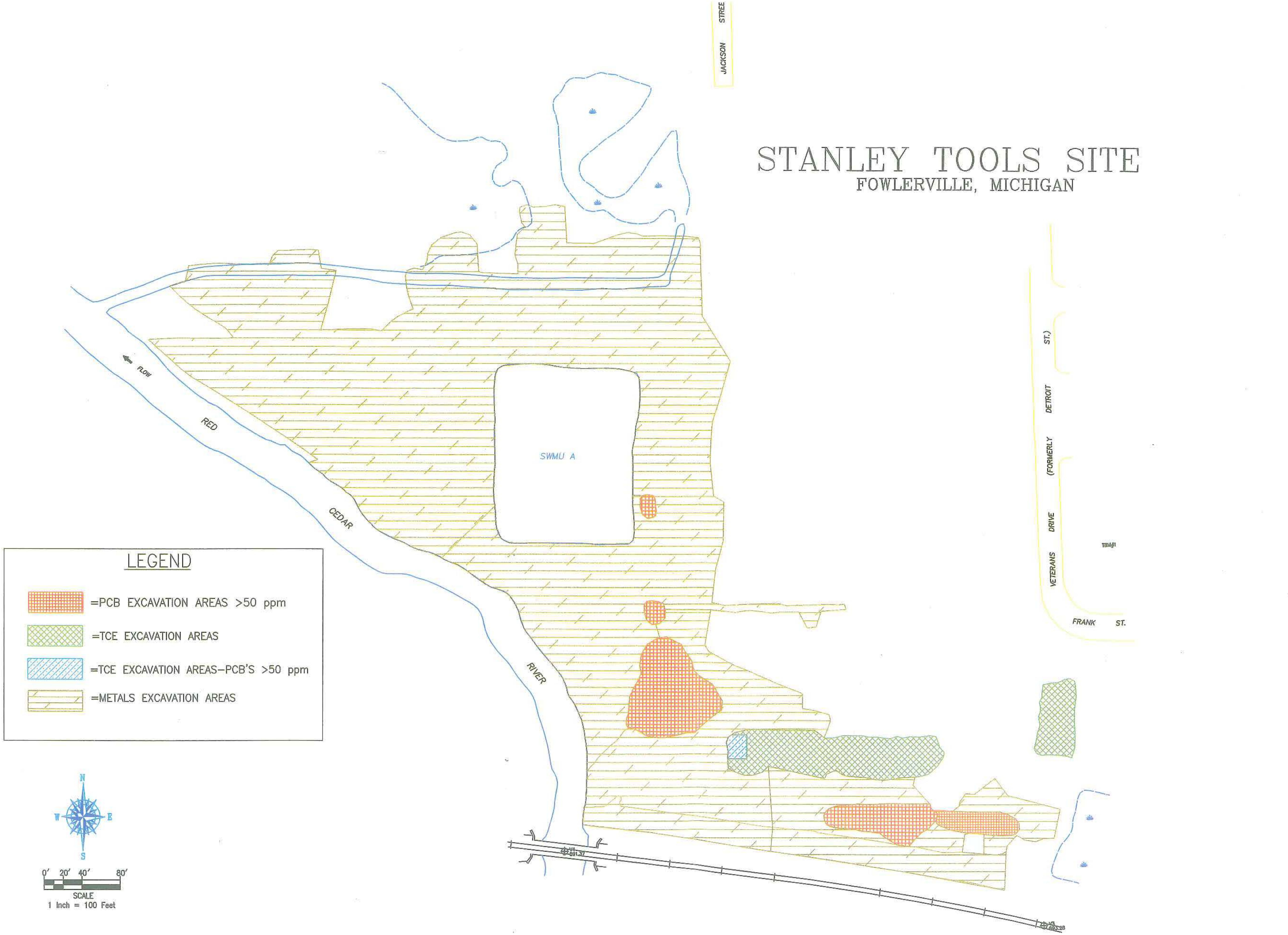
FILE NAME: Stanley

FIGURE NUMBER: 1b

ENTACT
environmental tactics in waste management

ENTACT & Associates, LLC.
1360 North Wood Dale Road Suite A
Wood Dale, IL 60191
P: 630-616-2100 F: 630-616-9203

DRN	RLR						
DES	RLR						
CHK	MMC						
APP	CDP						
			NO	REVISIONS	DRN	CHK	DATE



ENTACT & Associates, LLC.
1360 North Wood Dale Road Suite A
Wood Dale, IL 60191
P: 630-616-2100 F: 630-616-9203

DRN	RLR
DES	RLR
CHK	MMC
APP	CDP

NO	REVISIONS	DRN	CHK	DATE

ENTACT
environmental tactics in waste management

Johnson Controls, Inc.
Former Stanley Tool Site
Fowlerville, Michigan

EXCAVATION AREAS BY CONTAMINANT OF CONCERN

DATE: Dec. 16, 2003
PROJECT NUMBER: C818
FILE NAME: Stanley
FIGURE NUMBER: 1a

Pace Analytical™
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5027170
Client Project ID: Stanley Tool/C818

Solid results are reported on a wet weight basis

Lab Sample No: 502406994 | Project Sample Number: 5027170-001 | Date Collected: 04/30/03 17:05
Client Sample ID: GG41/6 | Matrix: Soil | Date Received: 05/01/03 10:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Metals									
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010								
Arsenic	0.0386	mg/l	0.0100	1.0	05/14/03 13:55	FRW	7440-38-2		
Barium	1.38	mg/l	0.100	1.0	05/14/03 13:55	FRW	7440-39-3		
Cadmium	ND	mg/l	0.00500	1.0	05/14/03 13:55	FRW	7440-43-9		
Chromium	ND	mg/l	0.0100	1.0	05/14/03 13:55	FRW	7440-47-3		
Copper	ND	mg/l	0.0200	1.0	05/14/03 13:55	FRW	7440-50-8		
Lead	0.0153	mg/l	0.0100	1.0	05/14/03 13:55	FRW	7439-92-1		
Selenium	ND	mg/l	0.0100	1.0	05/14/03 13:55	FRW	7782-49-2		
Silver	ND	mg/l	0.0500	1.0	05/14/03 13:55	FRW	7440-22-4		
Zinc	0.0602	mg/l	0.0500	1.0	05/14/03 13:55	FRW	7440-66-6		
Date Digested	05/09/03				05/09/03				
Mercury, CVAAS, TCLP Leachate	Prep/Method: EPA 7470 / EPA 7470								
Mercury	ND	ug/l	2.00	1.0	05/12/03	FRW	7439-97-6		
Semivolatile Organics, TCLP	Method: EPA 1311								
Date Digested	05/08/03 14:30				05/08/03 14:30				
Wet Chemistry									
Percent Moisture	Method: SM 2540G								
Percent Moisture	17.3	%		1.0	05/21/03	LAD			
Flash Point, Closed Cup	Method: EPA 1010								
Flash Point	143.5				05/14/03 11:40	FRW		1	
Phenolics Total. in Soil	Method: EPA 420.2								
Phenolics, Total Recoverable	ND	mg/kg	2.00	1.0	05/22/03 17:01	CLS			
pH, Soil	Method: EPA 9045								
pH	7.74			1.0	05/16/03 16:30	KSR			
Paint Filter Liquids Test	Method: EPA 9095								
Free Liquids	Pass: No Free Liquid				05/19/03	DDM			
Density by Standard Methods	Method: SM 2710F Modified								
Density	1.90	g/cm3	0.500	1.0	05/23/03	DDM			

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Phone: 317.875.5894
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Lab Project Number: 5027170
Client Project ID: Stanley Tool/C818

Lab Sample No: 502406994
Client Sample ID: GG41/6

Project Sample Number: 5027170-001
Matrix: Soil

Date Collected: 04/30/03 17:05
Date Received: 05/01/03 10:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Semivolatiles									
Semivolatile Organics, TCLP	Prep/Method: EPA 3510 / EPA 8270								
1,4-Dichlorobenzene	ND	ug/l	30.	0.3	05/12/03 20:11		106-46-7		
2-Methylphenol (o-Cresol)	ND	ug/l	30.	0.3	05/12/03 20:11		95-48-7		
3&4-Methylphenol	ND	ug/l	61.	0.3	05/12/03 20:11				
Nitrobenzene	ND	ug/l	30.	0.3	05/12/03 20:11		98-95-3		
Hexachloro-1,3-butadiene	ND	ug/l	30.	0.3	05/12/03 20:11		87-68-3		
2,4,6-Trichlorophenol	ND	ug/l	30.	0.3	05/12/03 20:11		88-06-2		
2,4,5-Trichlorophenol	ND	ug/l	150	0.3	05/12/03 20:11		95-95-4		
2,4-Dinitrotoluene	ND	ug/l	30.	0.3	05/12/03 20:11		121-14-2		
Hexachlorobenzene	ND	ug/l	30.	0.3	05/12/03 20:11		118-74-1		
Pentachlorophenol	ND	ug/l	150	0.3	05/12/03 20:11		87-86-5		
Pyridine	ND	ug/l	30.	0.3	05/12/03 20:11		110-86-1		
Hexachloroethane	ND	ug/l	30.	0.3	05/12/03 20:11		67-72-1		
Nitrobenzene-d5 (S)	78	%		1.0	05/12/03 20:11		4165-60-0		
2-Fluorobiphenyl (S)	87	%		1.0	05/12/03 20:11		321-60-8		
Terphenyl-d14 (S)	88	%		1.0	05/12/03 20:11		1718-51-0		
Phenol-d6 (S)	64	%		1.0	05/12/03 20:11		13127-88-3	2	
2-Fluorophenol (S)	75	%		1.0	05/12/03 20:11		367-12-4	2	
2,4,6-Tribromophenol (S)	95	%		1.0	05/12/03 20:11				
Date Extracted	05/09/03				05/09/03				
GC Semivolatiles									
PCBs in Soil by 8082	Prep/Method: EPA 3550 / EPA 8082								
PCB-1016 (Aroclor 1016)	ND	ug/kg	330	20.0	05/14/03 09:22	MED	12674-11-2		
PCB-1221 (Aroclor 1221)	ND	ug/kg	330	20.0	05/14/03 09:22	MED	11104-28-2		
PCB-1232 (Aroclor 1232)	ND	ug/kg	330	20.0	05/14/03 09:22	MED	11141-16-5		
PCB-1242 (Aroclor 1242)	ND	ug/kg	330	20.0	05/14/03 09:22	MED	53469-21-9		
PCB-1248 (Aroclor 1248)	3100	ug/kg	330	20.0	05/14/03 09:22	MED	12672-29-6		
PCB-1254 (Aroclor 1254)	ND	ug/kg	330	20.0	05/14/03 09:22	MED	11097-69-1		
PCB-1260 (Aroclor 1260)	ND	ug/kg	330	20.0	05/14/03 09:22	MED	11096-82-5		
Decachlorobiphenyl (S)	0	%		1.0	05/14/03 09:22	MED	2051-24-3	3	
Date Extracted	05/13/03				05/13/03				
GC Volatiles									
Aromatic Volatile Organics	Method: EPA 8021								
Benzene	ND	ug/kg	100	100	05/10/03 07:34	MAW	71-43-2		
Ethylbenzene	2700	ug/kg	500	100	05/10/03 07:34	MAW	100-41-4		
Toluene	ND	ug/kg	500	100	05/10/03 07:34	MAW	108-88-3		

REPORT OF LABORATORY ANALYSIS

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Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5027170
Client Project ID: Stanley Tool/C818

Lab Sample No: 502406994   Project Sample Number: 5027170-001   Date Collected: 04/30/03 17:05
Client Sample ID: GG41/6   Matrix: Soil   Date Received: 05/01/03 10:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
m&p-Xylene	18000	ug/kg	500	100	05/10/03 07:34	MAW			
o-Xylene	1300	ug/kg	500	100	05/10/03 07:34	MAW	95-47-6		
a,a,a-Trifluorotoluene (S)	89	%		1.0	05/10/03 07:34	MAW	98-08-8		
GC/MS Volatiles									
Volatile Organics, TCLP Leach.	Method: EPA 8260								
Vinyl chloride	ND	ug/l	100	10.0	05/07/03 12:07	HEB	75-01-4		
1,1-Dichloroethene	ND	ug/l	50.	10.0	05/07/03 12:07	HEB	75-35-4		
Chloroform	ND	ug/l	200	10.0	05/07/03 12:07	HEB	67-66-3		
1,2-Dichloroethane	ND	ug/l	50.	10.0	05/07/03 12:07	HEB	107-06-2		
2-Butanone (MEK)	ND	ug/l	1000	10.0	05/07/03 12:07	HEB	78-93-3		
Carbon tetrachloride	ND	ug/l	50.	10.0	05/07/03 12:07	HEB	56-23-5		
Trichloroethene	450	ug/l	50.	10.0	05/07/03 12:07	HEB	79-01-6		
Benzene	ND	ug/l	50.	10.0	05/07/03 12:07	HEB	71-43-2		
Tetrachloroethene	ND	ug/l	50.	10.0	05/07/03 12:07	HEB	127-18-4		
Chlorobenzene	89.	ug/l	50.	10.0	05/07/03 12:07	HEB	108-90-7		
Dibromofluoromethane (S)	105	%		1.0	05/07/03 12:07	HEB	1868-53-7		
Toluene-d8 (S)	98	%		1.0	05/07/03 12:07	HEB	2037-26-5		
4-Bromofluorobenzene (S)	98	%		1.0	05/07/03 12:07	HEB	460-00-4		

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Houston, TX 77058
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Fax: 281.488.4661

Lab Project Number: 8533919
Client Project ID: 5027170/ENTACT

Solid results are reported on a wet weight basis

Lab Sample No: 502406994 | Project Sample Number: 8533919-001 | Date Collected: 04/30/03 16:45
Client Sample ID: MM41/6 | Matrix: Soil | Date Received: 05/09/03 09:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Wet Chemistry								
Cyanide, Reactive	Method: SW-846 7.3.3.2							
Cyanide, Reactive	ND	mg/kg	0.500	05/13/03 16:00	NGAR			250
Sulfide, Reactive	Method: SW-846 7.3.4.2							
Sulfide, Reactive	ND	mg/kg	46.7	05/13/03 16:10	HFEB			500
GC Semivolatiles								
Pesticides, TCLP Leachate	Prep/Method: EPA 3510 / EPA 8080							
Chlordane (Technical)	ND	mg/l	0.0050	05/14/03 00:21	FOSE	57-74-9		
Endrin	ND	mg/l	0.0010	05/14/03 00:21	FOSE	72-20-8		
Heptachlor	ND	mg/l	0.00050	05/14/03 00:21	FOSE	76-44-8		
Toxaphene	ND	mg/l	0.024	05/14/03 00:21	FOSE	8001-35-2		
gamma-BHC (Lindane)	ND	mg/l	0.00050	05/14/03 00:21	FOSE	58-89-9		
Methoxychlor	ND	mg/l	0.0050	05/14/03 00:21	FOSE	72-43-5		
Decachlorobiphenyl (S)	110	%		05/14/03 00:21	FOSE	2051-24-3		
etrachloro-m-xylene (S)	99	%		05/14/03 00:21	FOSE	877-09-8		
Date Extracted	05/13/03			05/13/03				
Herbicides, TCLP Leachate	Prep/Method: EPA 8150 / EPA 8150							
2,4-D	ND	mg/l	0.20	05/14/03 18:56	FOSE	94-75-7		
2,4,5-TP (Silvex)	ND	mg/l	0.050	05/14/03 18:56	FOSE	93-72-1		
2,4-DCPA (S)	98	%		05/14/03 18:56	FOSE	19719-28-9		
Date Extracted	05/13/03			05/13/03				

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Lab Project Number: 9245339
Client Project ID: C818

Solid results are reported on a wet weight basis

Lab Sample No: 923034813 | Project Sample Number: 9245339-001 | Date Collected: 06/09/03 15:50
Client Sample ID: TCE-001 | Matrix: Soil | Date Received: 06/10/03 10:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles									
GC/MS VOCs by 8260, low level	Method: EPA 8260								
Trichloroethene	69.	ug/kg	5.0	1.0	06/11/03 06:23	RWS	79-01-6		
Toluene-d8 (S)	98	%		1.0	06/11/03 06:23	RWS	2037-26-5		
4-Bromofluorobenzene (S)	83	%		1.0	06/11/03 06:23	RWS	460-00-4		
Dibromofluoromethane (S)	80	%		1.0	06/11/03 06:23	RWS	1868-53-7		
1,2-Dichloroethane-d4 (S)	82	%		1.0	06/11/03 06:23	RWS	17060-07-0		

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Lab Project Number: 9245339
Client Project ID: C818

Lab Sample No: 923034821 | Project Sample Number: 9245339-002 | Date Collected: 06/09/03 15:55
Client Sample ID: TCE-002 | Matrix: Soil | Date Received: 06/10/03 10:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles									
GC/MS VOCs by 8260, low level	Method: EPA 8260								
Trichloroethene	270	ug/kg	5.0	1.0	06/11/03 07:12	RWS	79-01-6	1	
Toluene-d8 (S)	95	%		1.0	06/11/03 07:12	RWS	2037-26-5		
4-Bromofluorobenzene (S)	80	%		1.0	06/11/03 07:12	RWS	460-00-4		
Dibromofluoromethane (S)	93	%		1.0	06/11/03 07:12	RWS	1868-53-7		
1,2-Dichloroethane-d4 (S)	85	%		1.0	06/11/03 07:12	RWS	17060-07-0		

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Lab Project Number: 9245339
Client Project ID: C818

Lab Sample No: 923034839 Project Sample Number: 9245339-003 Date Collected: 06/09/03 16:00
Client Sample ID: TCE-003 Matrix: Soil Date Received: 06/10/03 10:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles									
GC/MS VOCs by 8260, low level	Method: EPA 8260								
Trichloroethene	200	ug/kg	5.0	1.0	06/11/03 07:29	RWS	79-01-6		
Toluene-d8 (S)	100	%		1.0	06/11/03 07:29	RWS	2037-26-5		
4-Bromofluorobenzene (S)	84	%		1.0	06/11/03 07:29	RWS	460-00-4		
Dibromofluoromethane (S)	100	%		1.0	06/11/03 07:29	RWS	1868-53-7		
1,2-Dichloroethane-d4 (S)	82	%		1.0	06/11/03 07:29	RWS	17060-07-0		

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Lab Project Number: 9245339
Client Project ID: C818

Lab Sample No: 923034847 | Project Sample Number: 9245339-004 | Date Collected: 06/09/03 16:03
Client Sample ID: TCE-004 | Matrix: Soil | Date Received: 06/10/03 10:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles									
GC/MS VOCs by 8260, low level	Method: EPA 8260								
Trichloroethene	820	ug/kg	250	50.0	06/11/03 07:45	RWS	79-01-6		
Toluene-d8 (S)	100	%		1.0	06/11/03 07:45	RWS	2037-26-5		
4-Bromofluorobenzene (S)	80	%		1.0	06/11/03 07:45	RWS	460-00-4		
Dibromofluoromethane (S)	84	%		1.0	06/11/03 07:45	RWS	1868-53-7		
1,2-Dichloroethane-d4 (S)	86	%		1.0	06/11/03 07:45	RWS	17060-07-0		

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Lab Project Number: 9245339
Client Project ID: C818

Lab Sample No: 923034854 | Project Sample Number: 9245339-005 | Date Collected: 06/09/03 16:05
Client Sample ID: TCE-005 | Matrix: Soil | Date Received: 06/10/03 10:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles									
GC/MS VOCs by 8260, low level	Method: EPA 8260								
Trichloroethene	280	ug/kg	5.0	1.0	06/11/03 08:01	RWS	79-01-6	1	
Toluene-d8 (S)	98	%		1.0	06/11/03 08:01	RWS	2037-26-5		
4-Bromofluorobenzene (S)	86	%		1.0	06/11/03 08:01	RWS	460-00-4		
Dibromofluoromethane (S)	103	%		1.0	06/11/03 08:01	RWS	1868-53-7		
1,2-Dichloroethane-d4 (S)	82	%		1.0	06/11/03 08:01	RWS	17060-07-0		

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Lab Project Number: 9245339
Client Project ID: C818

Lab Sample No: 923034862 Project Sample Number: 9245339-006 Date Collected: 06/09/03 16:10
Client Sample ID: TCE-006 Matrix: Soil Date Received: 06/10/03 10:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles									
GC/MS VOCs by 8260, low level	Method: EPA 8260								
Trichloroethene	770	ug/kg	5.0	1.0	06/11/03 08:18	RWS	79-01-6		
Toluene-d8 (S)	100	%		1.0	06/11/03 08:18	RWS	2037-26-5		
4-Bromofluorobenzene (S)	89	%		1.0	06/11/03 08:18	RWS	460-00-4		
Dibromofluoromethane (S)	88	%		1.0	06/11/03 08:18	RWS	1868-53-7		
1,2-Dichloroethane-d4 (S)	90	%		1.0	06/11/03 08:18	RWS	17060-07-0		

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Lab Project Number: 5028013
Client Project ID: C818

Solid results are reported on a wet weight basis

Lab Sample No: 502508583 Project Sample Number: 5028013-001 Date Collected: 06/12/03 09:30
Client Sample ID: TCE-007 Matrix: Soil Date Received: 06/13/03 09:35

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Trichloroethene	1100	ug/kg	1000	06/14/03 01:55	JAS1	79-01-6		
Dibromofluoromethane (S)	85	%		06/14/03 01:55	JAS1	1868-53-7		
Toluene-d8 (S)	104	%		06/14/03 01:55	JAS1	2037-26-5		
4-Bromofluorobenzene (S)	86	%		06/14/03 01:55	JAS1	460-00-4		

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 5028013
Client Project ID: C818

Lab Sample No: 502508625 | Project Sample Number: 5028013-002 | Date Collected: 06/12/03 09:36
Client Sample ID: TCE-008 | Matrix: Soil | Date Received: 06/13/03 09:35

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Trichloroethene	1200	ug/kg	1000	06/14/03 02:28	JAS1	79-01-6		
Dibromofluoromethane (S)	85	%		06/14/03 02:28	JAS1	1868-53-7		
Toluene-d8 (S)	104	%		06/14/03 02:28	JAS1	2037-26-5		
4-Bromofluorobenzene (S)	88	%		06/14/03 02:28	JAS1	460-00-4		

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Lab Project Number: 5028013
Client Project ID: C818

Lab Sample No: 502508633
Client Sample ID: TCE-009

Project Sample Number: 5028013-003
Matrix: Soil

Date Collected: 06/12/03 09:40
Date Received: 06/13/03 09:35

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Trichloroethene	1300	ug/kg	1000	06/14/03 03:02	JAS1	79-01-6		
Dibromofluoromethane (S)	87	%		06/14/03 03:02	JAS1	1868-53-7		
Toluene-d8 (S)	104	%		06/14/03 03:02	JAS1	2037-26-5		
4-Bromofluorobenzene (S)	86	%		06/14/03 03:02	JAS1	460-00-4		

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Lab Project Number: 5028013
Client Project ID: C818

Lab Sample No: 502508641 | Project Sample Number: 5028013-004 | Date Collected: 06/12/03 09:44
Client Sample ID: TCE-010 | Matrix: Soil | Date Received: 06/13/03 09:35

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Trichloroethene	1200	ug/kg	1000	06/14/03 03:35	JAS1	79-01-6		
Dibromofluoromethane (S)	86	%		06/14/03 03:35	JAS1	1868-53-7		
Toluene-d8 (S)	103	%		06/14/03 03:35	JAS1	2037-26-5		
4-Bromofluorobenzene (S)	87	%		06/14/03 03:35	JAS1	460-00-4		

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Lab Project Number: 5028013
Client Project ID: C818

Lab Sample No: 502508666 | Project Sample Number: 5028013-006 | Date Collected: 06/12/03 10:20
Client Sample ID: TCE-012 | Matrix: Soil | Date Received: 06/13/03 09:35

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Trichloroethene	730	J ug/kg	1000	06/14/03 04:42	JAS1	79-01-6	1	
Dibromofluoromethane (S)	84	%		06/14/03 04:42	JAS1	1868-53-7		
Toluene-d8 (S)	104	%		06/14/03 04:42	JAS1	2037-26-5		
4-Bromofluorobenzene (S)	87	%		06/14/03 04:42	JAS1	460-00-4		

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Lab Project Number: 5028111
Client Project ID: C818

Solid results are reported on a wet weight basis

Lab Sample No: 502520315 Project Sample Number: 5028111-001 Date Collected: 06/17/03 11:00
Client Sample ID: TCE 013 Matrix: Soil Date Received: 06/18/03 10:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Trichloroethene	1000	ug/kg	120	06/18/03 16:48	JAS1	79-01-6		
Dibromofluoromethane (S)	92	%		06/18/03 16:48	JAS1	1868-53-7		
Toluene-d8 (S)	97	%		06/18/03 16:48	JAS1	2037-26-5		
4-Bromofluorobenzene (S)	98	%		06/18/03 16:48	JAS1	460-00-4		

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Lab Project Number: 5028111
Client Project ID: C818

Lab Sample No: 502520323 | Project Sample Number: 5028111-002 | Date Collected: 06/17/03 10:30
Client Sample ID: TCE 014 | Matrix: Soil | Date Received: 06/18/03 10:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Trichloroethene	530	ug/kg	120	06/18/03 17:16	JAS1	79-01-6		
Dibromofluoromethane (S)	90	%		06/18/03 17:16	JAS1	1868-53-7		
Toluene-d8 (S)	97	%		06/18/03 17:16	JAS1	2037-26-5		
4-Bromofluorobenzene (S)	100	%		06/18/03 17:16	JAS1	460-00-4		

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Lab Project Number: 5028245
Client Project ID: C818

Solid results are reported on a wet weight basis

Lab Sample No: 502537020   Project Sample Number: 5028245-001   Date Collected: 06/23/03 13:47
Client Sample ID: TCE-015   Matrix: Soil   Date Received: 06/24/03 10:48

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Trichloroethene	130	ug/kg	5.0	06/25/03 14:19	HEB	79-01-6		
Dibromofluoromethane (S)	102	%		06/25/03 14:19	HEB	1868-53-7		
Toluene-d8 (S)	98	%		06/25/03 14:19	HEB	2037-26-5		
4-Bromofluorobenzene (S)	96	%		06/25/03 14:19	HEB	460-00-4		

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Lab Project Number: 5028531
Client Project ID: C818

Solid results are reported on a wet weight basis

Lab Sample No: 502573850 Project Sample Number: 5028531-001 Date Collected: 07/02/03 13:02
Client Sample ID: TCE-016R Matrix: Soil Date Received: 07/07/03 11:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Trichloroethene	16.	ug/kg	5.0	07/07/03 19:10	JAS1	79-01-6		
Dibromofluoromethane (S)	96	%		07/07/03 19:10	JAS1	1868-53-7		
Toluene-d8 (S)	92	%		07/07/03 19:10	JAS1	2037-26-5		
4-Bromofluorobenzene (S)	101	%		07/07/03 19:10	JAS1	460-00-4		

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Lab Project Number: 5028459
Client Project ID: C818

Solid results are reported on a wet weight basis

Lab Sample No: 502564305 Project Sample Number: 5028459-001 Date Collected: 07/01/03 09:39
Client Sample ID: TCE-017 Matrix: Soil Date Received: 07/02/03 10:45

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Trichloroethene	1600	ug/kg	120	07/02/03 21:51	HEB	79-01-6		
Dibromofluoromethane (S)	94	%		07/02/03 21:51	HEB	1868-53-7		
Toluene-d8 (S)	97	%		07/02/03 21:51	HEB	2037-26-5		
4-Bromofluorobenzene (S)	101	%		07/02/03 21:51	HEB	460-00-4		

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Lab Project Number: 5028459
Client Project ID: C818

Lab Sample No: 502564313 Project Sample Number: 5028459-002 Date Collected: 07/01/03 09:44
Client Sample ID: TCE-018 Matrix: Soil Date Received: 07/02/03 10:45

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Trichloroethene	880	ug/kg	250	07/02/03 22:19	HEB	79-01-6		
Dibromofluoromethane (S)	90	%		07/02/03 22:19	HEB	1868-53-7		
Toluene-d8 (S)	94	%		07/02/03 22:19	HEB	2037-26-5		
4-Bromofluorobenzene (S)	99	%		07/02/03 22:19	HEB	460-00-4		

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Lab Project Number: 5028725
Client Project ID: C818

Solid results are reported on a wet weight basis

Lab Sample No: 502596059 | Project Sample Number: 5028725-001 | Date Collected: 07/14/03 16:03
Client Sample ID: TCE-019 | Matrix: Soil | Date Received: 07/15/03 09:21

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	07/15/03 17:00			07/15/03 17:00				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Arsenic	ND	mg/l	0.0500	07/22/03 16:24	FRW	7440-38-2		
Barium	0.796	mg/l	0.500	07/22/03 16:24	FRW	7440-39-3		
Cadmium	ND	mg/l	0.0250	07/22/03 16:24	FRW	7440-43-9		
Chromium	ND	mg/l	0.0500	07/22/03 16:24	FRW	7440-47-3		
Copper	0.282	mg/l	0.100	07/22/03 16:24	FRW	7440-50-8		
Lead	ND	mg/l	0.0500	07/22/03 16:24	FRW	7439-92-1		
Nickel	0.686	mg/l	0.250	07/22/03 16:24	FRW	7440-02-0		
Selenium	ND	mg/l	0.0500	07/22/03 16:24	FRW	7782-49-2		
Zinc	8.37	mg/l	0.250	07/22/03 16:24	FRW	7440-66-6		
Date Digested	07/16/03			07/16/03				
Mercury, CVAAS, TCLP Leachate	Prep/Method: EPA 7470 / EPA 7470							
Mercury	ND	ug/l	2.00	07/18/03	FRW	7439-97-6		
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Trichloroethene	ND	ug/kg	5.0	07/15/03 20:03	JAS1	79-01-6		
Dibromofluoromethane (S)	97	%		07/15/03 20:03	JAS1	1868-53-7		
Toluene-d8 (S)	101	%		07/15/03 20:03	JAS1	2037-26-5		
4-Bromofluorobenzene (S)	113	%		07/15/03 20:03	JAS1	460-00-4		

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Lab Project Number: 5028725
Client Project ID: C818

Lab Sample No: 502596067 | Project Sample Number: 5028725-002 | Date Collected: 07/14/03 16:06
Client Sample ID: TCE-020 | Matrix: Soil | Date Received: 07/15/03 09:21

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	07/15/03 17:00			07/15/03 17:00				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Arsenic	ND	mg/l	0.0500	07/22/03 16:41	FRW	7440-38-2		
Barium	0.893	mg/l	0.500	07/22/03 16:41	FRW	7440-39-3		
Cadmium	ND	mg/l	0.0250	07/22/03 16:41	FRW	7440-43-9		
Chromium	ND	mg/l	0.0500	07/22/03 16:41	FRW	7440-47-3		
Copper	0.163	mg/l	0.100	07/22/03 16:41	FRW	7440-50-8		
Lead	ND	mg/l	0.0500	07/22/03 16:41	FRW	7439-92-1		
Nickel	0.325	mg/l	0.250	07/22/03 16:41	FRW	7440-02-0		
Selenium	ND	mg/l	0.0500	07/22/03 16:41	FRW	7782-49-2		
Zinc	5.08	mg/l	0.250	07/22/03 16:41	FRW	7440-66-6		
Date Digested	07/16/03			07/16/03				
Mercury, CVAAS, TCLP Leachate	Prep/Method: EPA 7470 / EPA 7470							
Mercury	ND	ug/l	2.00	07/18/03	FRW	7439-97-6		
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Trichloroethene	ND	ug/kg	5.0	07/15/03 20:29	JAS1	79-01-6		
Dibromofluoromethane (S)	92	%		07/15/03 20:29	JAS1	1868-53-7		
Toluene-d8 (S)	100	%		07/15/03 20:29	JAS1	2037-26-5		
4-Bromofluorobenzene (S)	100	%		07/15/03 20:29	JAS1	460-00-4		

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Lab Project Number: 5028725
Client Project ID: C818

Lab Sample No: 502596075 | Project Sample Number: 5028725-003 | Date Collected: 07/14/03 16:09
Client Sample ID: TCE-021 | Matrix: Soil | Date Received: 07/15/03 09:21

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	07/15/03 17:00			07/15/03 17:00				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Arsenic	ND	mg/l	0.0500	07/22/03 16:47	FRW	7440-38-2		
Barium	0.962	mg/l	0.500	07/22/03 16:47	FRW	7440-39-3		
Cadmium	ND	mg/l	0.0250	07/22/03 16:47	FRW	7440-43-9		
Chromium	0.982	mg/l	0.0500	07/22/03 16:47	FRW	7440-47-3		
Copper	0.395	mg/l	0.100	07/22/03 16:47	FRW	7440-50-8		
Lead	ND	mg/l	0.0500	07/22/03 16:47	FRW	7439-92-1		
Nickel	0.573	mg/l	0.250	07/22/03 16:47	FRW	7440-02-0		
Selenium	ND	mg/l	0.0500	07/22/03 16:47	FRW	7782-49-2		
Zinc	1.22	mg/l	0.250	07/22/03 16:47	FRW	7440-66-6		
Date Digested	07/16/03			07/16/03				
Mercury, CVAAS, TCLP Leachate	Prep/Method: EPA 7470 / EPA 7470							
Mercury	ND	ug/l	2.00	07/18/03	FRW	7439-97-6		
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Trichloroethene	9.9	ug/kg	5.0	07/15/03 20:55	JAS1	79-01-6	1	
Dibromofluoromethane (S)	96	%		07/15/03 20:55	JAS1	1868-53-7		
Toluene-d8 (S)	99	%		07/15/03 20:55	JAS1	2037-26-5		
4-Bromofluorobenzene (S)	103	%		07/15/03 20:55	JAS1	460-00-4		

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Lab Project Number: 5028725
Client Project ID: C818

Lab Sample No: 502596083
Client Sample ID: TCE-022

Project Sample Number: 5028725-004
Matrix: Soil

Date Collected: 07/14/03 16:12
Date Received: 07/15/03 09:21

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	07/15/03 17:00			07/15/03 17:00				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Arsenic	ND	mg/l	0.0500	07/22/03 16:52	FRW	7440-38-2		
Barium	0.776	mg/l	0.500	07/22/03 16:52	FRW	7440-39-3		
Cadmium	ND	mg/l	0.0250	07/22/03 16:52	FRW	7440-43-9		
Chromium	ND	mg/l	0.0500	07/22/03 16:52	FRW	7440-47-3		
Copper	2.66	mg/l	0.100	07/22/03 16:52	FRW	7440-50-8		
Lead	ND	mg/l	0.0500	07/22/03 16:52	FRW	7439-92-1		
Nickel	6.30	mg/l	0.250	07/22/03 16:52	FRW	7440-02-0		
Selenium	ND	mg/l	0.0500	07/22/03 16:52	FRW	7782-49-2		
Zinc	5.28	mg/l	0.250	07/22/03 16:52	FRW	7440-66-6		
Date Digested	07/16/03			07/16/03				
Mercury, CVAAS, TCLP Leachate	Prep/Method: EPA 7470 / EPA 7470							
Mercury	ND	ug/l	2.00	07/18/03	FRW	7439-97-6		
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Trichloroethene	1100	ug/kg	120	07/15/03 18:44	JAS1	79-01-6	1,2	
Dibromofluoromethane (S)	96	%		07/15/03 18:44	JAS1	1868-53-7		
Toluene-d8 (S)	100	%		07/15/03 18:44	JAS1	2037-26-5		
4-Bromofluorobenzene (S)	98	%		07/15/03 18:44	JAS1	460-00-4		

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Lab Project Number: 5028725
Client Project ID: C818

Lab Sample No: 502596091 | Project Sample Number: 5028725-005 | Date Collected: 07/14/03 16:15
Client Sample ID: TCE-023 | Matrix: Soil | Date Received: 07/15/03 09:21

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	07/15/03 17:00			07/15/03 17:00				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Arsenic	ND	mg/l	0.0500	07/22/03 16:58	FRW	7440-38-2		
Barium	0.844	mg/l	0.500	07/22/03 16:58	FRW	7440-39-3		
Cadmium	ND	mg/l	0.0250	07/22/03 16:58	FRW	7440-43-9		
Chromium	ND	mg/l	0.0500	07/22/03 16:58	FRW	7440-47-3		
Copper	0.616	mg/l	0.100	07/22/03 16:58	FRW	7440-50-8		
Lead	ND	mg/l	0.0500	07/22/03 16:58	FRW	7439-92-1		
Nickel	0.379	mg/l	0.250	07/22/03 16:58	FRW	7440-02-0		
Selenium	ND	mg/l	0.0500	07/22/03 16:58	FRW	7782-49-2		
Zinc	1.05	mg/l	0.250	07/22/03 16:58	FRW	7440-66-6		
Date Digested	07/16/03			07/16/03				
Mercury, CVAAS, TCLP Leachate	Prep/Method: EPA 7470 / EPA 7470							
Mercury	ND	ug/l	2.00	07/18/03	FRW	7439-97-6		
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Trichloroethene	27.	ug/kg	5.0	07/15/03 21:47	JAS1	79-01-6	1	
Dibromofluoromethane (S)	98	%		07/15/03 21:47	JAS1	1868-53-7		
Toluene-d8 (S)	101	%		07/15/03 21:47	JAS1	2037-26-5		
4-Bromofluorobenzene (S)	94	%		07/15/03 21:47	JAS1	460-00-4		

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Lab Project Number: 5028013
Client Project ID: C818

Lab Sample No: 502508658 — Project Sample Number: 5028013-005 — Date Collected: 06/12/03 10:15
Client Sample ID: TCE-011 — Matrix: Soil — Date Received: 06/13/03 09:35

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Trichloroethene	2200	ug/kg	1000	06/14/03 04:09	JAS1	79-01-6		
Dibromofluoromethane (S)	84	%		06/14/03 04:09	JAS1	1868-53-7		
Toluene-d8 (S)	105	%		06/14/03 04:09	JAS1	2037-26-5		
4-Bromofluorobenzene (S)	88	%		06/14/03 04:09	JAS1	460-00-4		

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Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5028725
Client Project ID: C818

Lab Sample No: 502596109 Project Sample Number: 5028725-006 Date Collected: 07/14/03 16:17
Client Sample ID: TCE-024 Matrix: Soil Date Received: 07/15/03 09:21

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
RCRA Metals, ICP, TCLP Leach.	Method: EPA 1311							
Date Digested	07/15/03 17:00			07/15/03 17:00				
RCRA Metals, ICP, TCLP Leach.	Prep/Method: EPA 3010 / EPA 6010							
Arsenic	ND	mg/l	0.0500	07/22/03 17:03	FRW	7440-38-2		
Barium	0.752	mg/l	0.500	07/22/03 17:03	FRW	7440-39-3		
Cadmium	ND	mg/l	0.0250	07/22/03 17:03	FRW	7440-43-9		
Chromium	0.0665	mg/l	0.0500	07/22/03 17:03	FRW	7440-47-3		
Copper	11.4	mg/l	0.100	07/22/03 17:03	FRW	7440-50-8		
Lead	ND	mg/l	0.0500	07/22/03 17:03	FRW	7439-92-1		
Nickel	7.12	mg/l	0.250	07/22/03 17:03	FRW	7440-02-0		
Selenium	ND	mg/l	0.0500	07/22/03 17:03	FRW	7782-49-2		
Zinc	6.76	mg/l	0.250	07/22/03 17:03	FRW	7440-66-6		
Date Digested	07/16/03			07/16/03				
Mercury, CVAAS, TCLP Leachate	Prep/Method: EPA 7470 / EPA 7470							
Mercury	ND	ug/l	2.00	07/18/03	FRW	7439-97-6		
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Trichloroethene	9.9	ug/kg	5.0	07/15/03 22:13	JAS1	79-01-6	1	
Dibromofluoromethane (S)	92	%		07/15/03 22:13	JAS1	1868-53-7		
Toluene-d8 (S)	99	%		07/15/03 22:13	JAS1	2037-26-5		
4-Bromofluorobenzene (S)	112	%		07/15/03 22:13	JAS1	460-00-4		

REPORT OF LABORATORY ANALYSIS

ACCREDITED IN ACCORDANCE WITH nelac

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Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5028745
Client Project ID: C818

Solid results are reported on a wet weight basis

Lab Sample No: 502598303 Project Sample Number: 5028745-001 Date Collected: 07/15/03 10:02
Client Sample ID: TCE-025 Matrix: Soil Date Received: 07/16/03 10:04

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Trichloroethene	870	ug/kg	120	07/16/03 19:54	HEB	79-01-6		
Dibromofluoromethane (S)	99	%		07/16/03 19:54	HEB	1868-53-7		
Toluene-d8 (S)	102	%		07/16/03 19:54	HEB	2037-26-5		
4-Bromofluorobenzene (S)	106	%		07/16/03 19:54	HEB	460-00-4		

Date: 07/17/03

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5028863
Client Project ID: C818

Solid results are reported on a wet weight basis

Lab Sample No: 502610082
Client Sample ID: TCE-026

Project Sample Number: 5028863-001
Matrix: Soil

Date Collected: 07/18/03 00:00
Date Received: 07/19/03 10:14

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Trichloroethene	ND	ug/kg	5.0	07/21/03 15:40	HEB	79-01-6		
Dibromofluoromethane (S)	93	%		07/21/03 15:40	HEB	1868-53-7		
Toluene-d8 (S)	103	%		07/21/03 15:40	HEB	2037-26-5		
4-Bromofluorobenzene (S)	100	%		07/21/03 15:40	HEB	460-00-4		

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Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5028863
Client Project ID: C818

Lab Sample No: 502610090 Project Sample Number: 5028863-002 Date Collected: 07/18/03 00:00
Client Sample ID: TCE-027 Matrix: Soil Date Received: 07/19/03 10:14

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Trichloroethene	ND	ug/kg	5.0	07/21/03 16:34	HEB	79-01-6		
Dibromofluoromethane (S)	93	%		07/21/03 16:34	HEB	1868-53-7		
Toluene-d8 (S)	104	%		07/21/03 16:34	HEB	2037-26-5		
4-Bromofluorobenzene (S)	102	%		07/21/03 16:34	HEB	460-00-4		

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Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5029123
Client Project ID: C818

Solid results are reported on a wet weight basis

Lab Sample No: 502642366
Client Sample ID: TCE-028
Project Sample Number: 5029123-001
Matrix: Soil
Date Collected: 07/30/03 14:33
Date Received: 07/31/03 10:45

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Trichloroethene	ND	ug/kg	5.0	07/31/03 14:14	JAS1	79-01-6		
Dibromofluoromethane (S)	106	%		07/31/03 14:14	JAS1	1868-53-7		
Toluene-d8 (S)	99	%		07/31/03 14:14	JAS1	2037-26-5		
4-Bromofluorobenzene (S)	98	%		07/31/03 14:14	JAS1	460-00-4		

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5029123
Client Project ID: C818

Lab Sample No: 502642374
Client Sample ID: TCE-029
Project Sample Number: 5029123-002
Matrix: Soil
Date Collected: 07/30/03 14:36
Date Received: 07/31/03 10:45

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Trichloroethene	6.2	ug/kg	5.0	07/31/03 15:35	JAS1	79-01-6		
Dibromofluoromethane (S)	105	%		07/31/03 15:35	JAS1	1868-53-7		
Toluene-d8 (S)	100	%		07/31/03 15:35	JAS1	2037-26-5		
4-Bromofluorobenzene (S)	102	%		07/31/03 15:35	JAS1	460-00-4		

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CHA...-OF-CUSTODY / Analytical Request Docu...nt

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Page: 01 of 01

Section A — Required Client Information:

Company	ENTACT + Assoc., LLC
Address	1360 N. Wood Dale Rd Ste A
	Wood Dale, IL 60191
Phone	630-616-2100
Fax	630-616-4203

Section B — Required Client Information:

Report To:	Brian Morgan
Copy To:	Rhonda Regester
Invoice To:	Wendy Murry
P.O.	
Project Name:	Stanley Tool
Project Number:	C818

Client Information (Check quote/contract):

Requested Due Date:	05-07-03
*TAT:	5 day

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.

Turn Around Time (TAT) in calendar days.

Section C — To Be Completed by Pace Analytical and Client

Quote Reference:	
Project Manager:	
Project #:	5027008
Profile #:	
Requested Analysis:	Total TCE; TCLP TCE; TCLP VOC's; TCLP SVOC's; MI 11 Metals / TCLP; PCB's

Section D — Required Client Information:

SAMPLE ID
One character per box.
(A-Z, 0-9 / .-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes:

MATRIX	CODE
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED mm / dd / yy	TIME COLLECTED hh:mm a/p	# Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Total TCE	TCLP TCE	TCLP VOC's	TCLP SVOC's	MI 11 Metals / TCLP	PCB's	Remarks / Lab ID
1	MM41/6	SL	04-30-03	16:45	5	✓							✓	✓					502389596
2	MM41/10		04-30-03	16:55	5	✓							✓	✓					502389604
3	GG41/6		04-30-03	17:05	5	✓							✓	✓					502389612
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			

15 OK
JH

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS	ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Fed Ex	837768043821	04-30-03	01		[signature]	043003	1830	J HAMMER	5/1	1030

WI

Additional Comments:

Call Brian Morgan @ 630-842-7388 prior to any analysis. Thanks

FedEx # 837768043821

Pace Project No.:

SAMPLE CONDITION

Temp:	Received on Ice:	Sealed Cooler:	Samples Intact:	pH
3.1 °C	(Y) N	(Y) / N	(Y) N	

ORIGINAL

SEE REVERSE SIDE FOR INSTRUCTIONS

CHAIN OF CUSTODY

ENTACT
1360 N. Wood Dale Rd. Suite A
Wood Dale, Illinois 60191
Ph. 630/616-2100 Fax 630/616-9203

Sampler: R. Regester Job #: C818

ENTACT Contact: R. Regester Date: 6.9.03

Turnaround Time Requested

24 Hour ☒ 48 Hour ☐ 3 Day ☐ Normal ☐ Other ☐ ____

Sample No.	Matrix	Composite or Grab	Description/Remarks	Preservative	Analysis
TCE·001	SOIL	GRAB	6.9.03 1550 TCE Area 1 (A)	ICE	A
TCE·002	↓	↓	6.9.03 1555 TCE Area 1 (A)	↓	↓
TCE·003	↓	↓	6.9.03 1600 TCE Area 1 (A)	↓	↓
TCE·004	↓	↓	6.9.03 1603 TCE Area 2 (B)	↓	↓
TCE·005	↓	↓	6.9.03 1605 TCE Area 2 (B)	↓	↓
TCE·006	↓	↓	6.9.03 1610 TCE Area 2 (B)	↓	↓

Samples Relinquished By: Rhonda Regester 6.9.03 1700hrs. Date

Samples Received By: ____ Date

Samples Relinquished By: ____ Date

Samples Received By: ____ Date

Samples Relinquished By: ____ Date

ANALYSIS

A= Total TCE F=

B= G=

C= H=

D= I=

E= J=

Condition of Sample Upon Receipt:

Bottles Intact? Yes / No	Volatiles Free of Headspace? Yes / No	COC Seals Present and Intact? Yes / No

Distribution:

Original - To Customer w/ Final Report
2nd Copy - To Job File
3rd Copy - To Lab

CHAIN OF (STODY

ENTACT

1360 N. Wood Dale Rd. Suite A
Wood Dale, Illinois 60191
Ph. 630/616-2100 Fax 630/616-9203

Sampler: R. REGESTER / D. DUNCAN Job #: C818

ENTACT Contact: R. REGESTER Date: 6.12.03

Turnaround Time Requested
24 Hour ☐ 48 Hour ☐ 3 Day ☐ Normal ☐ Other ☐ ______

Sample No.	Matrix	Composite or Grab	Description/Remarks	Preservative	Analysis
TCE.007	SOIL	GRAB	6.12.03 0930 TCE AREA 2	ICE	A
TCE.008	↓	↓	↓ 0936 ↓	↓	↓
TCE.009	↓	↓	↓ 0940 ↓	↓	↓
TCE.010	↓	↓	↓ 0944 ↓	↓	↓
TCE.011	↓	↓	↓ 1015 ↓	↓	↓
TCE.012	↓	↓	↓ 1020 ↓	↓	↓
BF.002	SOIL	GRAB	6.12.03 1000 BACKFILL	ICE	~~A~~ BCDE RR

Samples Relinquished By: Rhonda Regester 6.12.03 Date

Samples Received By: ______ Date

Samples Relinquished By: ______ Date

Samples Received By: ______ Date

Samples Relinquished By: ______ Date

ANALYSIS

A= Total TCE F=
B= MICH 11 METALS Total G=
C= PCB's H=
D= SVOC - Total I=
E= VOC - Total J=

Condition of Sample Upon Receipt:

Bottles Intact? Yes / No	Volatiles Free of Headspace? Yes / No	COC Seals Present and Intact? Yes / No

Distribution: ______
Original - To Customer w/ Final Report
2nd Copy - To Job File
3rd Copy - To Lab

CHAIN OF(STODY

ENTACT
1360 N. Wood Dale Rd. Suite A
Wood Dale, Illinois 60191
Ph. 630/616-2100 Fax 630/616-9203

Sampler: R. REGESTER Job #: C818

ENTACT Contact: R. REGESTER Date: 6.17.03

Turnaround Time Requested

24 Hour ☒ 48 Hour ☐ 3 Day ☐ Normal ☐ Other ☐ ______

Sample No.	Matrix	Composite or Grab	Description/Remarks	Preservative	Analysis
TCE 013	SOIL	Comp	Stockpile MM41 6.17.03 1100	Ice	A
TCE 014	↓	↓	↓ 6.17.03 1030	↓	↓

Samples Relinquished By: Rhonda Regester 6.17.03 Date

Samples Received By: ______ Date

Samples Relinquished By: ______ Date

Samples Received By: ______ Date

Samples Relinquished By: ______ Date

ANALYSIS

A= Total TCE
B=
C=
D=
E=
F=
G=
H=
I=
J=

Condition of Sample Upon Receipt:

Bottles Intact? Yes / No	Volatiles Free of Headspace? Yes / No	COC Seals Present and Intact? Yes / No

Distribution:
Original - To Customer w/ Final Report
2nd Copy - To Job File
3rd Copy - To Lab

CHAIN OF STODY

ENTACT

1360 N. Wood Dale Rd. Suite A
Wood Dale, Illinois 60191
Ph. 630/616-2100 Fax 630/616-9203

Sampler: K Sutliff   Job #: C 818

ENTACT Contact: R. Regester   Date: 6-23-03

Turnaround Time Requested

24 Hour ☒ 48 Hour ☐ 3 Day ☐ Normal ☐ Other ☐ ____

Sample No.	Matrix	Composite or Grab	Description/Remarks	Preservative	Analysis
TCE - 015	Soil	composite	Stockpiles KK 41 & LL 41 6-23-03 1347	ICE	A

Samples Relinquished By: Kurt Sutliff 6-23-03 Date

Samples Received By: ____ Date

Samples Relinquished By: ____ Date

Samples Received By: ____ Date

Samples Relinquished By: ____ Date

ANALYSIS

A= total TCE   F=

B=   G=

C=   H=

D=   I=

E=   J=

Condition of Sample Upon Receipt: Fed EX 840765860135 temp 4°C

Bottles Intact? Yes / No	Volatiles Free of Headspace? Yes / No	COC Seals Present and Intact? Yes / No

Distribution:
Original - To Customer w/ Final Report
2nd Copy - To Job File
3rd Copy - To Lab

CHAIN OF STODY

ENTACT

1360 N. Wood Dale Rd. Suite A
Wood Dale, Illinois 60191
Ph. 630/616-2100 Fax 630/616-9203

Sampler: K. Sutliff Job #: C-818

ENTACT Contact: R. Regester Date: 07-01-03

Turnaround Time Requested

24 Hour [X] 48 Hour [ ] 3 Day [ ] Normal [ ] Other [ ] ______

Sample No.	Matrix	Composite or Grab	Description/Remarks	Preservative	Analysis
TCE-016	Soil	Composite	TCE Area #3 07-01-03 0935	ICE	A
TCE-017	↓	↓	07-01-03 0939	↓	↓
TCE-018	↓	↓	↓ 07-01-03 0944	↓	↓

Samples Relinquished By: Kurt Sutliff 07-01-03 Date

Samples Received By: ______ Date

Samples Relinquished By: ______ Date

Samples Received By: ______ Date

Samples Relinquished By: ______ Date

ANALYSIS

A= Total TCE F=
B= G=
C= H=
D= I=
E= J=

Condition of Sample Upon Receipt:

Bottles Intact? Yes / No	Volatiles Free of Headspace? Yes / No	COC Seals Present and Intact? Yes / No

Distribution:

Original - To Customer w/ Final Report
2nd Copy - To Job File
3rd Copy - To Lab

CHAIN OF CUSTODY

ENTACT

1360 N. Wood Dale Rd. Suite A
Wood Dale, Illinois 60191
Ph. 630/616-2100 Fax 630/616-9203

Sampler: K. Sutliff Job #: C 818

ENTACT Contact: R Regester Date: 07-02-03

Turnaround Time Requested

24 Hour [X] 48 Hour [ ] 3 Day [ ] Normal [ ] Other [ ] ______

Sample No.	Matrix	Composite or Grab	Description/Remarks	Preservative	Analysis
TCE-016R	Soil	Composite	TCE Area #3 07-02-03 @ 1302 Resample	ICE	A

Samples Relinquished By: Kurt Sutliff 07-02-03 Date

Samples Received By: ______ Date

Samples Relinquished By: ______ Date

Samples Received By: ______ Date

Samples Relinquished By: ______ Date

ANALYSIS

A= total TCE.
B=
C=
D=
E=
F=
G=
H=
I=
J=

Condition of Sample Upon Receipt:

Bottles Intact? Yes / No	Volatiles Free of Headspace? Yes / No	COC Seals Present and Intact? Yes / No

Distribution:
Original - To Customer w/ Final Report
2nd Copy - To Job File
3rd Copy - To Lab

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Page: 1 **of** 1

Required Client Information: Section A

Company	Entact
Address	425 West Frank Street Fowlerville, Mi 48836
Phone	517-223-7633
Fax	517-223-7636

Required Client Information: Section B

Report To:	Rhonda Regester
Copy To:	Entact-Fowlerville
Invoice To:	Entact-Fowlerville
P.O.	
Project Name:	Stanley Tool
Project Number:	C 818

Client Information (Check quote/contract):

Requested Due Date:	*TAT:
7-16-03	24 hr. TAT

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.

Turn Around Time (TAT) in calendar days.

To Be Completed by Pace Analytical and Client — Section C

Quote Reference:	
Project Manager:	
Project #:	
Profile #:	

Requested Analysis: TCLP Mi. Metals; total TCE

Section D — Required Client Information:

SAMPLE ID — One character per box. (A–Z, 0–9 / .–) Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — WATER WT, SOIL SL, OIL OL, WIPE WP, AIR AR, TISSUE TS, OTHER OT

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED mm/dd/yy	TIME COLLECTED hh:mm a/p	# Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	TCLP Mi. Metals	total TCE	Remarks / Lab ID
1	TCE-019	SL	7-14-03	1603	1								X	X	X	
2	TCE-020	SL		1606	1								X	X	X	
3	TCE-021	SL		1609	1								X	X	X	
4	TCE-022	SL		1612	1								X	X	X	
5	TCE-023	SL		1615	1								X	X	X	
6	TCE-024	SL		1617	1								X	X	X	
7																
8																
9																
10																
11																
12																

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS	ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Federal Express	840768859977	7-14-03	1		Kurt Sutliff	7-14-03	1730			

SAMPLE CONDITION

Temp in °C	
Received on Ice	Y/N
Sealed Cooler	Y/N
Samples Intact	Y/N

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kurt Sutliff

SIGNATURE of SAMPLER: Kurt Sutliff

DATE Signed: (MM / DD / YY) 7-14-03

SEE REVERSE SIDE FOR INSTRUCTIONS

Form COC01 Rev 0402

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Page: 1 of 1

Section A — Required Client Information:

Company	Entact - Stanley Tool
Address	425 West Frank St
	Fowlerville, MI 48836
Phone	517-223-7633
Fax	517-223-7636

Section B — Required Client Information:

Report To:	Rhonda Regester
Copy To:	Entact - Fowlerville
Invoice To:	same
P.O.	
Project Name:	Stanley Tool
Project Number:	C-815

Client Information (Check quote/contract):

Requested Due Date:	*TAT:
7-17-03	24 hr TAT

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.

Turn Around Time (TAT) in calendar days.

Section C — To Be Completed by Pace Analytical and Client

Quote Reference:	
Project Manager:	
Project #:	
Profile #:	
Requested Analysis:	Total TCE

Section D — Required Client Information:

SAMPLE ID — One character per box. (A–Z, 0–9 / .–) Sample IDs MUST BE UNIQUE

Valid Matrix Codes MATRIX	CODE
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED mm / dd / yy	TIME COLLECTED hh:mm a/p	# Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Total TCE	Remarks / Lab ID
1	TCE-025	SL	7-15-03	1002	1								X	X	
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS	ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Federal Express		7-15-03	1		Kurt Sutliff	7-15-03	1100			

SAMPLE CONDITION

Temp in °C	
Received on Ice	Y/N
Sealed Cooler	Y/N
Samples Intact	Y/N

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kurt Sutliff

SIGNATURE of SAMPLER: Kurt Sutliff

DATE Signed: (MM / DD / YY) 07-15-03

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Page: 1 of 1

Section A — Required Client Information:

Company	ENTACT
Address	425 W. FRANK St. Fowlerville, Mi 48836
Phone	517-223-7633
Fax	517-223-7636

Section B — Required Client Information:

Report To:	Rhonda Regester
Copy To:	Entact - Fowlerville
Invoice To:	Entact - Fowlerville
P.O.	
Project Name:	Stanley Tool
Project Number:	C-818

Client Information (Check quote/contract):

Requested Due Date: 7-22-03 | *TAT: 24 hr. TAT

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.

Turn Around Time (TAT) in calendar days.

Section C — To Be Completed by Pace Analytical and Client

Quote Reference:	
Project Manager:	
Project #:	
Profile #:	

Section D — Required Client Information:

SAMPLE ID — One character per box. (A–Z, 0–9 / .–) Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — WATER WT, SOIL SL, OIL OL, WIPE WP, AIR AR, TISSUE TS, OTHER OT

Preservatives: Unpreserved, H_2SO_4, HNO_3, HCl, NaOH, $Na_2S_2O_3$, Methanol, Other

Requested Analysis: total TCE

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED mm/dd/yy	TIME COLLECTED hh:mm a/p	# Containers	Preservatives	total TCE	Remarks / Lab ID
1	TCE-026	SL	7-18-03				X	
2	TCE-027	SL	7-18-03				X	
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS
Federal Express	839689646516	7-18-03	1

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	Kurt Sutliff	7-18-03	1200			

SAMPLE CONDITION

Temp in °C	
Received on Ice	Y/N
Sealed Cooler	Y/N
Samples Intact	Y/N

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kurt Sutliff

SIGNATURE of SAMPLER: Kurt Sutliff

DATE Signed: (MM / DD / YY) 7-18-03

SEE REVERSE SIDE FOR INSTRUCTIONS

Form COC01 Rev 0402

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CHAIN-OF-CUSTODY / Analytical Request Document
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

711942

Page: 1 **of** 1

Section A Required Client Information:

Company	Enviro
Address	415 W. Frank St. Fowlerville, MI 48836
Phone	517-223-7633
Fax	517-223-7636

Section B Required Client Information:

Report To:	[illegible]
Copy To:	Enviro - Fowlerville
Invoice To:	SAME
P.O.	
Project Name:	Stanley tool
Project Number:	818

Client Information (Check quote/contract):

Requested Due Date:	*TAT:
8-01-03	24 hr TAT

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.
Turn Around Time (TAT) in calendar days.

Section C To Be Completed by Pace Analytical and Client

Quote Reference:	
Project Manager:	
Project #:	
Profile #:	
Requested Analysis:	Total TCE

Section D Required Client Information:

SAMPLE ID
One character per box.
(A–Z, 0–9 / .–)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes MATRIX	CODE
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED mm/dd/yy	TIME COLLECTED hh:mm a/p	# Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Total TCE	Remarks / Lab ID
1	TCE-028	SL	7-30-03	1433	1								X	X	
2	TCE-029	SL	7-30-03	1436	1								X	X	
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS	ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Federal Express	839674517330	7-30-03	1		Kurt Sutliff	7-30-03	1430			

SAMPLE CONDITION

Temp in °C	
Received on Ice	Y/N
Sealed Cooler	Y/N
Samples Intact	Y/N

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kurt Sutliff

SIGNATURE of SAMPLER: Kurt Sutliff

DATE Signed: (MM / DD / YY) 07-30-03

SEE REVERSE SIDE FOR INSTRUCTIONS

Form COC01 Rev 0402

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Pace Analytical Services, Inc.
9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9245024
Client Project ID: C818

Solid results are reported on a wet weight basis

Lab Sample No: 923017727 | Project Sample Number: 9245024-001 | Date Collected: 06/03/03 00:00
Client Sample ID: BF-001 | Matrix: Soil | Date Received: 06/04/03 10:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Metals									
Metals, Trace ICP	Prep/Method: EPA 3050 / EPA 6010								
Arsenic	3.0	mg/kg	0.50	1.0	06/10/03 17:11	LBG	7440-38-2		
Barium	7.2	mg/kg	0.50	1.0	06/10/03 17:11	LBG	7440-39-3		
Cadmium	ND	mg/kg	0.10	1.0	06/10/03 17:11	LBG	7440-43-9		
Chromium	4.3	mg/kg	0.20	1.0	06/10/03 17:11	LBG	7440-47-3		
Lead	2.5	mg/kg	0.50	1.0	06/10/03 17:11	LBG	7439-92-1		
Nickel	5.2	mg/kg	0.50	1.0	06/10/03 17:11	LBG	7440-02-0		
Selenium	ND	mg/kg	0.50	1.0	06/10/03 17:11	LBG	7782-49-2		
Silver	ND	mg/kg	0.20	1.0	06/10/03 17:11	LBG	7440-22-4		
Zinc	16.	mg/kg	1.0	1.0	06/10/03 17:11	LBG	7440-66-6		
Date Digested	06/06/03				06/06/03				
Mercury, CVAAS, in Soil	Method: EPA 7471								
Mercury	ND	mg/kg	0.0045	0.9	06/09/03	LBG	7439-97-6		
GC/MS Semivolatiles									
Semivolatile Organics	Prep/Method: EPA 3550 / EPA 8270								
Acenaphthene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	83-32-9		
Acenaphthylene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	208-96-8		
Anthracene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	120-12-7		
Benzo(a)anthracene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	56-55-3		
Benzo(a)pyrene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	50-32-8		
Benzo(b)fluoranthene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	205-99-2		
Benzo(g,h,i)perylene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	191-24-2		
Benzo(k)fluoranthene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	207-08-9		
Benzoic acid	ND	ug/kg	1600	1.0	06/06/03 11:44	BET	65-85-0		
Benzyl alcohol	ND	ug/kg	660	1.0	06/06/03 11:44	BET	100-51-6		
4-Bromophenylphenyl ether	ND	ug/kg	330	1.0	06/06/03 11:44	BET	101-55-3		
Butylbenzylphthalate	ND	ug/kg	330	1.0	06/06/03 11:44	BET	85-68-7		
4-Chloro-3-methylphenol	ND	ug/kg	660	1.0	06/06/03 11:44	BET	59-50-7		
4-Chloroaniline	ND	ug/kg	660	1.0	06/06/03 11:44	BET	106-47-8		
bis(2-Chloroethoxy)methane	ND	ug/kg	330	1.0	06/06/03 11:44	BET	111-91-1		
bis(2-Chloroethyl) ether	ND	ug/kg	330	1.0	06/06/03 11:44	BET	111-44-4		
bis(2-Chloroisopropyl) ether	ND	ug/kg	330	1.0	06/06/03 11:44	BET	39638-32-9		
2-Chloronaphthalene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	91-58-7		
2-Chlorophenol	ND	ug/kg	330	1.0	06/06/03 11:44	BET	95-57-8		
4-Chlorophenylphenyl ether	ND	ug/kg	330	1.0	06/06/03 11:44	BET	7005-72-3		

Date: 06/11/03

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Phone: 704.875.9092
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Lab Project Number: 9245024
Client Project ID: C818

Lab Sample No: 923017727 | Project Sample Number: 9245024-001 | Date Collected: 06/03/03 00:00
Client Sample ID: BF-001 | Matrix: Soil | Date Received: 06/04/03 10:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Chrysene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	218-01-9		
Dibenz(a,h)anthracene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	53-70-3		
Dibenzofuran	ND	ug/kg	330	1.0	06/06/03 11:44	BET	132-64-9		
1,2-Dichlorobenzene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	95-50-1		
1,3-Dichlorobenzene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	106-46-7		
3,3'-Dichlorobenzidine	ND	ug/kg	660	1.0	06/06/03 11:44	BET	91-94-1		
2,4-Dichlorophenol	ND	ug/kg	330	1.0	06/06/03 11:44	BET	120-83-2		
Diethylphthalate	ND	ug/kg	330	1.0	06/06/03 11:44	BET	84-66-2		
2,4-Dimethylphenol	ND	ug/kg	330	1.0	06/06/03 11:44	BET	105-67-9		
Dimethylphthalate	ND	ug/kg	330	1.0	06/06/03 11:44	BET	131-11-3		
Di-n-butylphthalate	ND	ug/kg	330	1.0	06/06/03 11:44	BET	84-74-2		
4,6-Dinitro-2-methylphenol	ND	ug/kg	330	1.0	06/06/03 11:44	BET	534-52-1		
2,4-Dinitrophenol	ND	ug/kg	1600	1.0	06/06/03 11:44	BET	51-28-5		
2,4-Dinitrotoluene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	121-14-2		
2,6-Dinitrotoluene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	606-20-2		
Di-n-octylphthalate	ND	ug/kg	330	1.0	06/06/03 11:44	BET	117-84-0		
1,2-Diphenylhydrazine	ND	ug/kg	330	1.0	06/06/03 11:44	BET	122-66-7		
bis(2-Ethylhexyl)phthalate	ND	ug/kg	330	1.0	06/06/03 11:44	BET	117-81-7		
Fluoranthene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	206-44-0		
Fluorene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	86-73-7		
Hexachloro-1,3-butadiene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	87-68-3		
Hexachlorobenzene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	118-74-1		
Hexachlorocyclopentadiene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	77-47-4		
Hexachloroethane	ND	ug/kg	330	1.0	06/06/03 11:44	BET	67-72-1		
Indeno(1,2,3-cd)pyrene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	193-39-5		
Isophorone	ND	ug/kg	330	1.0	06/06/03 11:44	BET	78-59-1		
2-Methylnaphthalene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	91-57-6		
2-Methylphenol (o-Cresol)	ND	ug/kg	330	1.0	06/06/03 11:44	BET	95-48-7		
3&4-Methylphenol	ND	ug/kg	330	1.0	06/06/03 11:44	BET			
Naphthalene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	91-20-3		
2-Nitroaniline	ND	ug/kg	1600	1.0	06/06/03 11:44	BET	88-74-4		
3-Nitroaniline	ND	ug/kg	1600	1.0	06/06/03 11:44	BET	99-09-2		
4-Nitroaniline	ND	ug/kg	1600	1.0	06/06/03 11:44	BET	100-01-6		
Nitrobenzene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	98-95-3		
2-Nitrophenol	ND	ug/kg	330	1.0	06/06/03 11:44	BET	88-75-5		
4-Nitrophenol	ND	ug/kg	1600	1.0	06/06/03 11:44	BET	100-02-7		
N-Nitroso-di-n-propylamine	ND	ug/kg	330	1.0	06/06/03 11:44	BET	621-64-7		
N-Nitrosodiphenylamine	ND	ug/kg	330	1.0	06/06/03 11:44	BET	86-30-6		

Date: 06/11/03

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Lab Project Number: 9245024
Client Project ID: C818

Lab Sample No: 923017727 | Project Sample Number: 9245024-001 | Date Collected: 06/03/03 00:00
Client Sample ID: BF-001 | Matrix: Soil | Date Received: 06/04/03 10:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Pentachlorophenol	ND	ug/kg	1600	1.0	06/06/03 11:44	BET	87-86-5		
Phenanthrene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	85-01-8		
Phenol	ND	ug/kg	330	1.0	06/06/03 11:44	BET	108-95-2		
Pyrene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	129-00-0		
1,2,4-Trichlorobenzene	ND	ug/kg	330	1.0	06/06/03 11:44	BET	120-82-1		
2,4,5-Trichlorophenol	ND	ug/kg	330	1.0	06/06/03 11:44	BET	95-95-4		
2,4,6-Trichlorophenol	ND	ug/kg	330	1.0	06/06/03 11:44	BET	88-06-2		
Nitrobenzene-d5 (S)	62	%		1.0	06/06/03 11:44	BET	4165-60-0		
2-Fluorobiphenyl (S)	58	%		1.0	06/06/03 11:44	BET	321-60-8		
Terphenyl-d14 (S)	95	%		1.0	06/06/03 11:44	BET	1718-51-0		
Phenol-d5 (S)	64	%		1.0	06/06/03 11:44	BET	4165-62-2		
2-Fluorophenol (S)	58	%		1.0	06/06/03 11:44	BET	367-12-4		
2,4,6-Tribromophenol (S)	80	%		1.0	06/06/03 11:44	BET			
Date Extracted	06/05/03				06/05/03				
GC Semivolatiles									
Organochlorine PCBs	Prep/Method: EPA 3550 / EPA 8082								
PCB-1016 (Aroclor 1016)	ND	ug/kg	33.	1.0	06/09/03 09:08	CBE	12674-11-2		
PCB-1221 (Aroclor 1221)	ND	ug/kg	33.	1.0	06/09/03 09:08	CBE	11104-28-2		
PCB-1232 (Aroclor 1232)	ND	ug/kg	33.	1.0	06/09/03 09:08	CBE	11141-16-5		
PCB-1242 (Aroclor 1242)	ND	ug/kg	33.	1.0	06/09/03 09:08	CBE	53469-21-9		
PCB-1248 (Aroclor 1248)	ND	ug/kg	33.	1.0	06/09/03 09:08	CBE	12672-29-6		
PCB-1254 (Aroclor 1254)	ND	ug/kg	33.	1.0	06/09/03 09:08	CBE	11097-69-1		
PCB-1260 (Aroclor 1260)	ND	ug/kg	33.	1.0	06/09/03 09:08	CBE	11096-82-5		
Decachlorobiphenyl (S)	95	%		1.0	06/09/03 09:08	CBE	2051-24-3		
Date Extracted	06/05/03				06/05/03				
GC/MS Volatiles									
GC/MS VOCs by 8260, low level	Method: EPA 8260								
Benzene	5.4	ug/kg	5.0	1.0	06/05/03 18:42	RWS	71-43-2		
Bromobenzene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	108-86-1		
Bromochloromethane	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	74-97-5		
Bromodichloromethane	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	75-27-4		
Bromoform	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	75-25-2		
Bromomethane	ND	ug/kg	10.	1.0	06/05/03 18:42	RWS	74-83-9		
n-Butylbenzene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	104-51-8		
sec-Butylbenzene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	135-98-8		
tert-Butylbenzene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	98-06-6		
Carbon tetrachloride	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	56-23-5		

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Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9245024
Client Project ID: C818

Lab Sample No: 923017727 | Project Sample Number: 9245024-001 | Date Collected: 06/03/03 00:00
Client Sample ID: BF-001 | Matrix: Soil | Date Received: 06/04/03 10:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Chlorobenzene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	108-90-7		
Chloroethane	ND	ug/kg	10.	1.0	06/05/03 18:42	RWS	75-00-3		
Chloroform	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	67-66-3		
Chloromethane	ND	ug/kg	10.	1.0	06/05/03 18:42	RWS	74-87-3		
2-Chlorotoluene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	95-49-8		
4-Chlorotoluene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	106-43-4		
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	96-12-8		
Dibromochloromethane	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	106-93-4		
Dibromomethane	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	74-95-3		
1,2-Dichlorobenzene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	95-50-1		
1,3-Dichlorobenzene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	106-46-7		
Dichlorodifluoromethane	ND	ug/kg	10.	1.0	06/05/03 18:42	RWS	75-71-8		
1,1-Dichloroethane	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	75-34-3		
1,2-Dichloroethane	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	107-06-2		
1,1-Dichloroethene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	75-35-4		
cis-1,2-Dichloroethene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	156-59-2		
trans-1,2-Dichloroethene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	156-60-5		
1,2-Dichloropropane	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	78-87-5		
1,3-Dichloropropane	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	142-28-9		
2,2-Dichloropropane	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	594-20-7		
1,1-Dichloropropene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	563-58-6		
Diisopropyl ether	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	108-20-3		
Ethylbenzene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	87-68-3		
Isopropylbenzene (Cumene)	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	98-82-8		
p-Isopropyltoluene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	99-87-6		
Methylene chloride	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	75-09-2		
Methyl-tert-butyl ether	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	1634-04-4		
Naphthalene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	91-20-3		
n-Propylbenzene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	103-65-1		
Styrene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	100-42-5		
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	79-34-5		
Tetrachloroethene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	127-18-4		
Toluene	13.	ug/kg	5.0	1.0	06/05/03 18:42	RWS	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	120-82-1		

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Lab Project Number: 9245024
Client Project ID: C818

Lab Sample No: 923017727 | Project Sample Number: 9245024-001 | Date Collected: 06/03/03 00:00
Client Sample ID: BF-001 | Matrix: Soil | Date Received: 06/04/03 10:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
1,1,1-Trichloroethane	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	71-55-6		
1,1,2-Trichloroethane	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	79-00-5		
Trichloroethene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	79-01-6		
Trichlorofluoromethane	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	75-69-4		
1,2,3-Trichloropropane	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	96-18-4		
1,2,4-Trimethylbenzene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	108-67-8		
Vinyl chloride	ND	ug/kg	10.	1.0	06/05/03 18:42	RWS	75-01-4		
m&p-Xylene	ND	ug/kg	10.	1.0	06/05/03 18:42	RWS			
o-Xylene	ND	ug/kg	5.0	1.0	06/05/03 18:42	RWS	95-47-6		
Toluene-d8 (S)	97	%		1.0	06/05/03 18:42	RWS	2037-26-5		
4-Bromofluorobenzene (S)	89	%		1.0	06/05/03 18:42	RWS	460-00-4		
Dibromofluoromethane (S)	87	%		1.0	06/05/03 18:42	RWS	1868-53-7		
1,2-Dichloroethane-d4 (S)	85	%		1.0	06/05/03 18:42	RWS	17060-07-0		

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Lab Project Number: 5028013
Client Project ID: C818

Lab Sample No: 502508674 Project Sample Number: 5028013-007 Date Collected: 06/12/03 10:00
Client Sample ID: BF-002 Matrix: Soil Date Received: 06/13/03 09:35

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Metals, Trace ICP	Prep/Method: EPA 3050 / EPA 6010							
Arsenic	2.69	mg/kg	1.59	06/17/03 10:23	FRW	7440-38-2		
Barium	10.4	mg/kg	1.59	06/17/03 10:23	FRW	7440-39-3		
Cadmium	ND	mg/kg	1.59	06/17/03 10:23	FRW	7440-43-9	2	
Chromium	5.03	mg/kg	1.59	06/17/03 10:23	FRW	7440-47-3		
Copper	6.96	mg/kg	1.59	06/17/03 10:23	FRW	7440-50-8		
Lead	2.56	mg/kg	1.59	06/17/03 10:23	FRW	7439-92-1		
Nickel	5.96	mg/kg	1.59	06/17/03 10:23	FRW	7440-02-0		
Selenium	ND	mg/kg	1.59	06/17/03 10:23	FRW	7782-49-2	2	
Silver	ND	mg/kg	1.59	06/17/03 10:23	FRW	7440-22-4	2	
Zinc	17.5	mg/kg	1.59	06/17/03 10:23	FRW	7440-66-6		
Date Digested	06/16/03			06/16/03				
Mercury, CVAAS	Method: EPA 7471							
Mercury	ND	mg/kg	1.00	06/17/03	DDM	7439-97-6		
'MS Semivolatiles								
mivolatile Organics	Prep/Method: EPA 3550 Sonication / EPA 8270							
Phenol	ND	ug/kg	330	06/19/03 19:51	SRS	108-95-2		
bis(2-Chloroethyl) ether	ND	ug/kg	330	06/19/03 19:51	SRS	111-44-4		
2-Chlorophenol	ND	ug/kg	330	06/19/03 19:51	SRS	95-57-8		
1,3-Dichlorobenzene	ND	ug/kg	330	06/19/03 19:51	SRS	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	330	06/19/03 19:51	SRS	106-46-7		
Benzyl alcohol	ND	ug/kg	660	06/19/03 19:51	SRS	100-51-6		
1,2-Dichlorobenzene	ND	ug/kg	330	06/19/03 19:51	SRS	95-50-1		
2-Methylphenol (o-Cresol)	ND	ug/kg	330	06/19/03 19:51	SRS	95-48-7		
bis(2-Chloroisopropyl) ether	ND	ug/kg	330	06/19/03 19:51	SRS	39638-32-9		
3&4-Methylphenol	ND	ug/kg	660	06/19/03 19:51	SRS			
N-Nitroso-di-n-propylamine	ND	ug/kg	330	06/19/03 19:51	SRS	621-64-7		
Hexachloroethane	ND	ug/kg	330	06/19/03 19:51	SRS	67-72-1		
Nitrobenzene	ND	ug/kg	330	06/19/03 19:51	SRS	98-95-3		
Isophorone	ND	ug/kg	330	06/19/03 19:51	SRS	78-59-1		
2-Nitrophenol	ND	ug/kg	330	06/19/03 19:51	SRS	88-75-5		
2,4-Dimethylphenol	ND	ug/kg	330	06/19/03 19:51	SRS	105-67-9		
Benzoic acid	ND	ug/kg	1600	06/19/03 19:51	SRS	65-85-0		
bis(2-Chloroethoxy)methane	ND	ug/kg	330	06/19/03 19:51	SRS	111-91-1		
2,4-Dichlorophenol	ND	ug/kg	330	06/19/03 19:51	SRS	120-83-2		
1,2,4-Trichlorobenzene	ND	ug/kg	330	06/19/03 19:51	SRS	120-82-1		

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Lab Project Number: 5028013
Client Project ID: C818

Lab Sample No: 502508674 Project Sample Number: 5028013-007 Date Collected: 06/12/03 10:00
Client Sample ID: BF-002 Matrix: Soil Date Received: 06/13/03 09:35

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Naphthalene	ND	ug/kg	330	06/19/03 19:51	SRS	91-20-3		
4-Chloroaniline	ND	ug/kg	660	06/19/03 19:51	SRS	106-47-8		
Hexachloro-1,3-butadiene	ND	ug/kg	330	06/19/03 19:51	SRS	87-68-3		
4-Chloro-3-methylphenol	ND	ug/kg	660	06/19/03 19:51	SRS	59-50-7		
2-Methylnaphthalene	ND	ug/kg	330	06/19/03 19:51	SRS	91-57-6		
Hexachlorocyclopentadiene	ND	ug/kg	330	06/19/03 19:51	SRS	77-47-4		
2,4,6-Trichlorophenol	ND	ug/kg	330	06/19/03 19:51	SRS	88-06-2		
2,4,5-Trichlorophenol	ND	ug/kg	330	06/19/03 19:51	SRS	95-95-4		
2-Chloronaphthalene	ND	ug/kg	330	06/19/03 19:51	SRS	91-58-7		
2-Nitroaniline	ND	ug/kg	1600	06/19/03 19:51	SRS	88-74-4		
Dimethylphthalate	ND	ug/kg	330	06/19/03 19:51	SRS	131-11-3		
Acenaphthylene	ND	ug/kg	330	06/19/03 19:51	SRS	208-96-8		
2,6-Dinitrotoluene	ND	ug/kg	330	06/19/03 19:51	SRS	606-20-2		
3-Nitroaniline	ND	ug/kg	1600	06/19/03 19:51	SRS	99-09-2		
Acenaphthene	ND	ug/kg	330	06/19/03 19:51	SRS	83-32-9		
2,4-Dinitrophenol	ND	ug/kg	1600	06/19/03 19:51	SRS	51-28-5		
4-Nitrophenol	ND	ug/kg	1600	06/19/03 19:51	SRS	100-02-7		
Dibenzofuran	ND	ug/kg	330	06/19/03 19:51	SRS	132-64-9		
2,4-Dinitrotoluene	ND	ug/kg	330	06/19/03 19:51	SRS	121-14-2		
Diethylphthalate	ND	ug/kg	330	06/19/03 19:51	SRS	84-66-2		
4-Chlorophenylphenyl ether	ND	ug/kg	330	06/19/03 19:51	SRS	7005-72-3		
Fluorene	ND	ug/kg	330	06/19/03 19:51	SRS	86-73-7		
4-Nitroaniline	ND	ug/kg	1600	06/19/03 19:51	SRS	100-01-6		
4,6-Dinitro-2-methylphenol	ND	ug/kg	1600	06/19/03 19:51	SRS	534-52-1		
N-Nitrosodiphenylamine	ND	ug/kg	330	06/19/03 19:51	SRS	86-30-6		
4-Bromophenylphenyl ether	ND	ug/kg	330	06/19/03 19:51	SRS	101-55-3		
Hexachlorobenzene	ND	ug/kg	330	06/19/03 19:51	SRS	118-74-1		
Pentachlorophenol	ND	ug/kg	1600	06/19/03 19:51	SRS	87-86-5		
Phenanthrene	ND	ug/kg	330	06/19/03 19:51	SRS	85-01-8		
Anthracene	ND	ug/kg	330	06/19/03 19:51	SRS	120-12-7		
Di-n-butylphthalate	ND	ug/kg	330	06/19/03 19:51	SRS	84-74-2		
Fluoranthene	ND	ug/kg	330	06/19/03 19:51	SRS	206-44-0		
Pyrene	ND	ug/kg	330	06/19/03 19:51	SRS	129-00-0		
Butylbenzylphthalate	ND	ug/kg	330	06/19/03 19:51	SRS	85-68-7		
3,3'-Dichlorobenzidine	ND	ug/kg	660	06/19/03 19:51	SRS	91-94-1		
Benzo(a)anthracene	ND	ug/kg	330	06/19/03 19:51	SRS	56-55-3		
Chrysene	ND	ug/kg	330	06/19/03 19:51	SRS	218-01-9		
bis(2-Ethylhexyl)phthalate	ND	ug/kg	330	06/19/03 19:51	SRS	117-81-7		
Di-n-octylphthalate	ND	ug/kg	330	06/19/03 19:51	SRS	117-84-0		

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Lab Project Number: 5028013
Client Project ID: C818

Lab Sample No: 502508674 Project Sample Number: 5028013-007 Date Collected: 06/12/03 10:00
Client Sample ID: BF-002 Matrix: Soil Date Received: 06/13/03 09:35

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Benzo(b)fluoranthene	ND	ug/kg	330	06/19/03 19:51	SRS	205-99-2		
Benzo(k)fluoranthene	ND	ug/kg	330	06/19/03 19:51	SRS	207-08-9		
Benzo(a)pyrene	ND	ug/kg	330	06/19/03 19:51	SRS	50-32-8		
Indeno(1,2,3-cd)pyrene	ND	ug/kg	330	06/19/03 19:51	SRS	193-39-5		
Dibenz(a,h)anthracene	ND	ug/kg	330	06/19/03 19:51	SRS	53-70-3		
Benzo(g,h,i)perylene	ND	ug/kg	330	06/19/03 19:51	SRS	191-24-2		
Nitrobenzene-d5 (S)	60	%		06/19/03 19:51	SRS	4165-60-0		
2-Fluorobiphenyl (S)	60	%		06/19/03 19:51	SRS	321-60-8		
Terphenyl-d14 (S)	63	%		06/19/03 19:51	SRS	1718-51-0		
Phenol-d6 (S)	64	%		06/19/03 19:51	SRS	13127-88-3		
2-Fluorophenol (S)	58	%		06/19/03 19:51	SRS	367-12-4		
2,4,6-Tribromophenol (S)	56	%		06/19/03 19:51	SRS			
Date Extracted	06/13/03			06/13/03				
GC Semivolatiles								
PCBs in Soil by 8082	Prep/Method: EPA 3550 / EPA 8082							
PCB-1016 (Aroclor 1016)	ND	ug/kg	16.	06/16/03 16:19	MED	12674-11-2		
CB-1221 (Aroclor 1221)	ND	ug/kg	16.	06/16/03 16:19	MED	11104-28-2		
CB-1232 (Aroclor 1232)	ND	ug/kg	16.	06/16/03 16:19	MED	11141-16-5		
PCB-1242 (Aroclor 1242)	ND	ug/kg	16.	06/16/03 16:19	MED	53469-21-9		
PCB-1248 (Aroclor 1248)	ND	ug/kg	16.	06/16/03 16:19	MED	12672-29-6		
PCB-1254 (Aroclor 1254)	ND	ug/kg	16.	06/16/03 16:19	MED	11097-69-1		
PCB-1260 (Aroclor 1260)	ND	ug/kg	16.	06/16/03 16:19	MED	11096-82-5		
Decachlorobiphenyl (S)	104	%		06/16/03 16:19	MED	2051-24-3		
Date Extracted	06/13/03			06/13/03				
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Dichlorodifluoromethane	ND	ug/kg	5.0	06/14/03 01:22	JAS1	75-71-8		
Chloromethane	ND	ug/kg	5.0	06/14/03 01:22	JAS1	74-87-3		
Vinyl chloride	ND	ug/kg	2.0	06/14/03 01:22	JAS1	75-01-4		
Bromomethane	ND	ug/kg	5.0	06/14/03 01:22	JAS1	74-83-9		
Chloroethane	ND	ug/kg	5.0	06/14/03 01:22	JAS1	75-00-3		
Trichlorofluoromethane	ND	ug/kg	5.0	06/14/03 01:22	JAS1	75-69-4		
Methylene chloride	8.9	ug/kg	5.0	06/14/03 01:22	JAS1	75-09-2	3	
1,1-Dichloroethene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	75-35-4		
trans-1,2-Dichloroethene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	156-60-5		
1,1-Dichloroethane	ND	ug/kg	5.0	06/14/03 01:22	JAS1	75-34-3		
2,2-Dichloropropane	ND	ug/kg	5.0	06/14/03 01:22	JAS1	594-20-7		

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Lab Project Number: 5028013
Client Project ID: C818

Lab Sample No: 502508674 Project Sample Number: 5028013-007 Date Collected: 06/12/03 10:00
Client Sample ID: BF-002 Matrix: Soil Date Received: 06/13/03 09:35

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
cis-1,2-Dichloroethene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	156-59-2		
Chloroform	ND	ug/kg	5.0	06/14/03 01:22	JAS1	67-66-3		
Bromochloromethane	ND	ug/kg	5.0	06/14/03 01:22	JAS1	74-97-5		
1,1,1-Trichloroethane	ND	ug/kg	5.0	06/14/03 01:22	JAS1	71-55-6		
Carbon tetrachloride	ND	ug/kg	5.0	06/14/03 01:22	JAS1	56-23-5		
1,1-Dichloropropene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	563-58-6		
Benzene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	71-43-2		
1,2-Dichloroethane	ND	ug/kg	5.0	06/14/03 01:22	JAS1	107-06-2		
Trichloroethene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	79-01-6		
1,2-Dichloropropane	ND	ug/kg	5.0	06/14/03 01:22	JAS1	78-87-5		
Bromodichloromethane	ND	ug/kg	5.0	06/14/03 01:22	JAS1	75-27-4		
Dibromomethane	ND	ug/kg	5.0	06/14/03 01:22	JAS1	74-95-3		
Toluene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	108-88-3		
1,1,2-Trichloroethane	ND	ug/kg	5.0	06/14/03 01:22	JAS1	79-00-5		
Tetrachloroethene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	127-18-4		
1,3-Dichloropropane	ND	ug/kg	5.0	06/14/03 01:22	JAS1	142-28-9		
Dibromochloromethane	ND	ug/kg	5.0	06/14/03 01:22	JAS1	124-48-1		
,2-Dibromoethane (EDB)	ND	ug/kg	5.0	06/14/03 01:22	JAS1	106-93-4		
hlorobenzene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	108-90-7		
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.0	06/14/03 01:22	JAS1	630-20-6		
Ethylbenzene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	100-41-4		
m&p-Xylene	ND	ug/kg	5.0	06/14/03 01:22	JAS1			
o-Xylene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	95-47-6		
Styrene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	100-42-5		
Bromoform	ND	ug/kg	5.0	06/14/03 01:22	JAS1	75-25-2		
Isopropylbenzene (Cumene)	ND	ug/kg	5.0	06/14/03 01:22	JAS1	98-82-8		
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0	06/14/03 01:22	JAS1	79-34-5		
Bromobenzene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	108-86-1		
1,2,3-Trichloropropane	ND	ug/kg	5.0	06/14/03 01:22	JAS1	96-18-4		
n-Propylbenzene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	103-65-1		
2-Chlorotoluene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	95-49-8		
1,3,5-Trimethylbenzene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	108-67-8		
4-Chlorotoluene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	106-43-4		
1,2,4-Trimethylbenzene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	95-63-6		
sec-Butylbenzene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	135-98-8		
tert-Butylbenzene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	98-06-6		
p-Isopropyltoluene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	99-87-6		
1,3-Dichlorobenzene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	106-46-7		

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Lab Project Number: 5028013
Client Project ID: C818

Lab Sample No: 502508674 Project Sample Number: 5028013-007 Date Collected: 06/12/03 10:00
Client Sample ID: BF-002 Matrix: Soil Date Received: 06/13/03 09:35

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
n-Butylbenzene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	104-51-8		
1,2-Dichlorobenzene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	95-50-1		
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.0	06/14/03 01:22	JAS1	96-12-8		
1,2,4-Trichlorobenzene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	120-82-1		
Hexachloro-1,3-butadiene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	87-68-3		
Naphthalene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	91-20-3		
1,2,3-Trichlorobenzene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	87-61-6		
trans-1,3-Dichloropropene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	10061-02-6		
cis-1,3-Dichloropropene	ND	ug/kg	5.0	06/14/03 01:22	JAS1	10061-01-5		
2-Chloroethylvinyl ether	ND	ug/kg	50.	06/14/03 01:22	JAS1	110-75-8		
Acetone	ND	ug/kg	100	06/14/03 01:22	JAS1	67-64-1		
2-Butanone (MEK)	ND	ug/kg	10.	06/14/03 01:22	JAS1	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	10.	06/14/03 01:22	JAS1	108-10-1		
Carbon disulfide	ND	ug/kg	10.	06/14/03 01:22	JAS1	75-15-0		
Acrolein	ND	ug/kg	100	06/14/03 01:22	JAS1	107-02-8		
Acrylonitrile	ND	ug/kg	100	06/14/03 01:22	JAS1	107-13-1		
2-Hexanone	ND	ug/kg	100	06/14/03 01:22	JAS1	591-78-6		
`inyl acetate	ND	ug/kg	100	06/14/03 01:22	JAS1	108-05-4		
.odomethane	ND	ug/kg	100	06/14/03 01:22	JAS1	74-88-4		
Methyl-tert-butyl ether	ND	ug/kg	5.0	06/14/03 01:22	JAS1	1634-04-4		
Ethyl methacrylate	ND	ug/kg	100	06/14/03 01:22	JAS1	97-63-2		
trans-1,4-Dichloro-2-butene	ND	ug/kg	100	06/14/03 01:22	JAS1	110-57-6		
Dibromofluoromethane (S)	86	%		06/14/03 01:22	JAS1	1868-53-7		
Toluene-d8 (S)	105	%		06/14/03 01:22	JAS1	2037-26-5		
4-Bromofluorobenzene (S)	85	%		06/14/03 01:22	JAS1	460-00-4		

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Lab Project Number: 5029975
Client Project ID: C818 Stanley Tools

Solid results are reported on a wet weight basis

Lab Sample No: 502750458 | Project Sample Number: 5029975-001 | Date Collected: 09/09/03 13:30
Client Sample ID: BF003R | Matrix: Soil | Date Received: 09/10/03 09:57

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Metals, Trace ICP	Prep/Method: EPA 3050 / EPA 6010							
Arsenic	3.38	mg/kg	1.55	09/11/03 02:31	FRW	7440-38-2		
Barium	11.2	mg/kg	1.55	09/11/03 02:31	FRW	7440-39-3		
Cadmium	ND	mg/kg	1.55	09/11/03 02:31	FRW	7440-43-9	2	
Chromium	6.56	mg/kg	1.55	09/11/03 02:31	FRW	7440-47-3		
Copper	11.2	mg/kg	1.55	09/11/03 02:31	FRW	7440-50-8		
Lead	4.26	mg/kg	1.55	09/11/03 02:31	FRW	7439-92-1		
Nickel	6.75	mg/kg	1.55	09/11/03 02:31	FRW	7440-02-0		
Selenium	0.516 J	mg/kg	1.55	09/11/03 02:31	FRW	7782-49-2	1	
Zinc	17.5	mg/kg	1.55	09/11/03 02:31	FRW	7440-66-6		
Date Digested	09/10/03			09/10/03				
Mercury, CVAAS	Method: EPA 7471							
Mercury	ND	mg/kg	0.100	09/11/03	DMT	7439-97-6		
t Chemistry								
ıromium, Hexavalent, in Soil	Prep/Method: EPA 3060 / EPA 7196 Modified							
Chromium, Hexavalent	ND	mg/kg	3.3	09/26/03 11:00	KSR	18540-29-9	3	
GC/MS Semivolatiles								
Semivolatile Organics	Prep/Method: EPA 3550 Sonication / EPA 8270							
Phenol	ND	ug/kg	330	09/14/03 21:36	KES	108-95-2		
bis(2-Chloroethyl) ether	ND	ug/kg	330	09/14/03 21:36	KES	111-44-4		
2-Chlorophenol	ND	ug/kg	330	09/14/03 21:36	KES	95-57-8		
1,3-Dichlorobenzene	ND	ug/kg	330	09/14/03 21:36	KES	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	330	09/14/03 21:36	KES	106-46-7		
Benzyl alcohol	ND	ug/kg	660	09/14/03 21:36	KES	100-51-6		
1,2-Dichlorobenzene	ND	ug/kg	330	09/14/03 21:36	KES	95-50-1		
2-Methylphenol (o-Cresol)	ND	ug/kg	330	09/14/03 21:36	KES	95-48-7		
bis(2-Chloroisopropyl) ether	ND	ug/kg	330	09/14/03 21:36	KES	39638-32-9		
3&4-Methylphenol	ND	ug/kg	660	09/14/03 21:36	KES			
N-Nitroso-di-n-propylamine	ND	ug/kg	330	09/14/03 21:36	KES	621-64-7		
Hexachloroethane	ND	ug/kg	330	09/14/03 21:36	KES	67-72-1		
Nitrobenzene	ND	ug/kg	330	09/14/03 21:36	KES	98-95-3		
Isophorone	ND	ug/kg	330	09/14/03 21:36	KES	78-59-1		
2-Nitrophenol	ND	ug/kg	330	09/14/03 21:36	KES	88-75-5		
2,4-Dimethylphenol	ND	ug/kg	330	09/14/03 21:36	KES	105-67-9		

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 5029975
Client Project ID: C818 Stanley Tools

Lab Sample No: 502750458
Client Sample ID: BF003R

Project Sample Number: 5029975-001
Matrix: Soil

Date Collected: 09/09/03 13:30
Date Received: 09/10/03 09:57

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Benzoic acid	ND	ug/kg	1600	09/14/03 21:36	KES	65-85-0		
bis(2-Chloroethoxy)methane	ND	ug/kg	330	09/14/03 21:36	KES	111-91-1		
2,4-Dichlorophenol	ND	ug/kg	330	09/14/03 21:36	KES	120-83-2		
1,2,4-Trichlorobenzene	ND	ug/kg	330	09/14/03 21:36	KES	120-82-1		
Naphthalene	ND	ug/kg	330	09/14/03 21:36	KES	91-20-3		
4-Chloroaniline	ND	ug/kg	660	09/14/03 21:36	KES	106-47-8		
Hexachloro-1,3-butadiene	ND	ug/kg	330	09/14/03 21:36	KES	87-68-3		
4-Chloro-3-methylphenol	ND	ug/kg	660	09/14/03 21:36	KES	59-50-7		
2-Methylnaphthalene	ND	ug/kg	330	09/14/03 21:36	KES	91-57-6		
Hexachlorocyclopentadiene	ND	ug/kg	330	09/14/03 21:36	KES	77-47-4		
2,4,6-Trichlorophenol	ND	ug/kg	330	09/14/03 21:36	KES	88-06-2		
2,4,5-Trichlorophenol	ND	ug/kg	330	09/14/03 21:36	KES	95-95-4		
2-Chloronaphthalene	ND	ug/kg	330	09/14/03 21:36	KES	91-58-7		
2-Nitroaniline	ND	ug/kg	1600	09/14/03 21:36	KES	88-74-4		
Dimethylphthalate	ND	ug/kg	330	09/14/03 21:36	KES	131-11-3		
Acenaphthylene	ND	ug/kg	330	09/14/03 21:36	KES	208-96-8		
2,6-Dinitrotoluene	ND	ug/kg	330	09/14/03 21:36	KES	606-20-2		
3-Nitroaniline	ND	ug/kg	1600	09/14/03 21:36	KES	99-09-2		
Acenaphthene	ND	ug/kg	330	09/14/03 21:36	KES	83-32-9		
2,4-Dinitrophenol	ND	ug/kg	1600	09/14/03 21:36	KES	51-28-5		
4-Nitrophenol	ND	ug/kg	1600	09/14/03 21:36	KES	100-02-7		
Dibenzofuran	ND	ug/kg	330	09/14/03 21:36	KES	132-64-9		
2,4-Dinitrotoluene	ND	ug/kg	330	09/14/03 21:36	KES	121-14-2		
Diethylphthalate	ND	ug/kg	330	09/14/03 21:36	KES	84-66-2		
4-Chlorophenylphenyl ether	ND	ug/kg	330	09/14/03 21:36	KES	7005-72-3		
Fluorene	ND	ug/kg	330	09/14/03 21:36	KES	86-73-7		
4-Nitroaniline	ND	ug/kg	1600	09/14/03 21:36	KES	100-01-6		
4,6-Dinitro-2-methylphenol	ND	ug/kg	1600	09/14/03 21:36	KES	534-52-1		
N-Nitrosodiphenylamine	ND	ug/kg	330	09/14/03 21:36	KES	86-30-6		
4-Bromophenylphenyl ether	ND	ug/kg	330	09/14/03 21:36	KES	101-55-3		
Hexachlorobenzene	ND	ug/kg	330	09/14/03 21:36	KES	118-74-1		
Pentachlorophenol	ND	ug/kg	1600	09/14/03 21:36	KES	87-86-5		
Phenanthrene	ND	ug/kg	330	09/14/03 21:36	KES	85-01-8		
Anthracene	ND	ug/kg	330	09/14/03 21:36	KES	120-12-7		
Di-n-butylphthalate	ND	ug/kg	330	09/14/03 21:36	KES	84-74-2		
Fluoranthene	ND	ug/kg	330	09/14/03 21:36	KES	206-44-0		
Pyrene	ND	ug/kg	330	09/14/03 21:36	KES	129-00-0		
Butylbenzylphthalate	ND	ug/kg	330	09/14/03 21:36	KES	85-68-7		
3,3'-Dichlorobenzidine	ND	ug/kg	660	09/14/03 21:36	KES	91-94-1		

Date: 10/16/03

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Phone: 317.875.5894
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Lab Project Number: 5029975
Client Project ID: C818 Stanley Tools

Lab Sample No: 502750458 | Project Sample Number: 5029975-001 | Date Collected: 09/09/03 13:30
Client Sample ID: BF003R | Matrix: Soil | Date Received: 09/10/03 09:57

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Benzo(a)anthracene	ND	ug/kg	330	09/14/03 21:36	KES	56-55-3		
Chrysene	ND	ug/kg	330	09/14/03 21:36	KES	218-01-9		
bis(2-Ethylhexyl)phthalate	ND	ug/kg	330	09/14/03 21:36	KES	117-81-7		
Di-n-octylphthalate	ND	ug/kg	330	09/14/03 21:36	KES	117-84-0		
Benzo(b)fluoranthene	ND	ug/kg	330	09/14/03 21:36	KES	205-99-2		
Benzo(k)fluoranthene	ND	ug/kg	330	09/14/03 21:36	KES	207-08-9		
Benzo(a)pyrene	ND	ug/kg	330	09/14/03 21:36	KES	50-32-8		
Indeno(1,2,3-cd)pyrene	ND	ug/kg	330	09/14/03 21:36	KES	193-39-5		
Dibenz(a,h)anthracene	ND	ug/kg	330	09/14/03 21:36	KES	53-70-3		
Benzo(g,h,i)perylene	ND	ug/kg	330	09/14/03 21:36	KES	191-24-2		
Aniline	ND	ug/kg	330	09/14/03 21:36	KES	62-53-3		
Nitrobenzene-d5 (S)	80	%		09/14/03 21:36	KES	4165-60-0		
2-Fluorobiphenyl (S)	89	%		09/14/03 21:36	KES	321-60-8		
Terphenyl-d14 (S)	74	%		09/14/03 21:36	KES	1718-51-0		
Phenol-d6 (S)	87	%		09/14/03 21:36	KES	13127-88-3		
2-Fluorophenol (S)	83	%		09/14/03 21:36	KES	367-12-4		
2,4,6-Tribromophenol (S)	81	%		09/14/03 21:36	KES			
Date Extracted	09/11/03			09/11/03				
GC Semivolatiles								
PCBs in Soil by 8082	Prep/Method: EPA 3550 / EPA 8082							
PCB-1016 (Aroclor 1016)	ND	ug/kg	16.	09/10/03 18:52	MED	12674-11-2		
PCB-1221 (Aroclor 1221)	ND	ug/kg	16.	09/10/03 18:52	MED	11104-28-2		
PCB-1232 (Aroclor 1232)	ND	ug/kg	16.	09/10/03 18:52	MED	11141-16-5		
PCB-1242 (Aroclor 1242)	ND	ug/kg	16.	09/10/03 18:52	MED	53469-21-9		
PCB-1248 (Aroclor 1248)	ND	ug/kg	16.	09/10/03 18:52	MED	12672-29-6		
PCB-1254 (Aroclor 1254)	ND	ug/kg	16.	09/10/03 18:52	MED	11097-69-1		
PCB-1260 (Aroclor 1260)	ND	ug/kg	16.	09/10/03 18:52	MED	11096-82-5		
Decachlorobiphenyl (S)	111	%		09/10/03 18:52	MED	2051-24-3		
Date Extracted	09/10/03			09/10/03				
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Dichlorodifluoromethane	ND	ug/kg	5.0	09/11/03 19:58	HEB	75-71-8		
Chloromethane	ND	ug/kg	5.0	09/11/03 19:58	HEB	74-87-3		
Vinyl chloride	ND	ug/kg	2.0	09/11/03 19:58	HEB	75-01-4		
Bromomethane	ND	ug/kg	5.0	09/11/03 19:58	HEB	74-83-9		
Chloroethane	ND	ug/kg	5.0	09/11/03 19:58	HEB	75-00-3		
Trichlorofluoromethane	ND	ug/kg	5.0	09/11/03 19:58	HEB	75-69-4		

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Lab Project Number: 5029975
Client Project ID: C818 Stanley Tools

Lab Sample No: 502750458
Client Sample ID: BF003R

Project Sample Number: 5029975-001
Matrix: Soil

Date Collected: 09/09/03 13:30
Date Received: 09/10/03 09:57

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Methylene chloride	ND	ug/kg	20.	09/11/03 19:58	HEB	75-09-2		
1,1-Dichloroethene	ND	ug/kg	5.0	09/11/03 19:58	HEB	75-35-4		
trans-1,2-Dichloroethene	ND	ug/kg	5.0	09/11/03 19:58	HEB	156-60-5		
1,1-Dichloroethane	ND	ug/kg	5.0	09/11/03 19:58	HEB	75-34-3		
2,2-Dichloropropane	ND	ug/kg	5.0	09/11/03 19:58	HEB	594-20-7		
cis-1,2-Dichloroethene	ND	ug/kg	5.0	09/11/03 19:58	HEB	156-59-2		
Chloroform	ND	ug/kg	5.0	09/11/03 19:58	HEB	67-66-3		
Bromochloromethane	ND	ug/kg	5.0	09/11/03 19:58	HEB	74-97-5		
1,1,1-Trichloroethane	ND	ug/kg	5.0	09/11/03 19:58	HEB	71-55-6		
Carbon tetrachloride	ND	ug/kg	5.0	09/11/03 19:58	HEB	56-23-5		
1,1-Dichloropropene	ND	ug/kg	5.0	09/11/03 19:58	HEB	563-58-6		
Benzene	ND	ug/kg	5.0	09/11/03 19:58	HEB	71-43-2		
1,2-Dichloroethane	ND	ug/kg	5.0	09/11/03 19:58	HEB	107-06-2		
Trichloroethene	ND	ug/kg	5.0	09/11/03 19:58	HEB	79-01-6		
1,2-Dichloropropane	ND	ug/kg	5.0	09/11/03 19:58	HEB	78-87-5		
Bromodichloromethane	ND	ug/kg	5.0	09/11/03 19:58	HEB	75-27-4		
Dibromomethane	ND	ug/kg	5.0	09/11/03 19:58	HEB	74-95-3		
Toluene	ND	ug/kg	5.0	09/11/03 19:58	HEB	108-88-3		
1,1,2-Trichloroethane	ND	ug/kg	5.0	09/11/03 19:58	HEB	79-00-5		
Tetrachloroethene	ND	ug/kg	5.0	09/11/03 19:58	HEB	127-18-4		
1,3-Dichloropropane	ND	ug/kg	5.0	09/11/03 19:58	HEB	142-28-9		
Dibromochloromethane	ND	ug/kg	5.0	09/11/03 19:58	HEB	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/kg	5.0	09/11/03 19:58	HEB	106-93-4		
Chlorobenzene	ND	ug/kg	5.0	09/11/03 19:58	HEB	108-90-7		
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.0	09/11/03 19:58	HEB	630-20-6		
Ethylbenzene	ND	ug/kg	5.0	09/11/03 19:58	HEB	100-41-4		
m&p-Xylene	ND	ug/kg	5.0	09/11/03 19:58	HEB			
o-Xylene	ND	ug/kg	5.0	09/11/03 19:58	HEB	95-47-6		
Styrene	ND	ug/kg	5.0	09/11/03 19:58	HEB	100-42-5		
Bromoform	ND	ug/kg	5.0	09/11/03 19:58	HEB	75-25-2		
Isopropylbenzene (Cumene)	ND	ug/kg	5.0	09/11/03 19:58	HEB	98-82-8		
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0	09/11/03 19:58	HEB	79-34-5		
Bromobenzene	ND	ug/kg	5.0	09/11/03 19:58	HEB	108-86-1		
1,2,3-Trichloropropane	ND	ug/kg	5.0	09/11/03 19:58	HEB	96-18-4		
n-Propylbenzene	ND	ug/kg	5.0	09/11/03 19:58	HEB	103-65-1		
2-Chlorotoluene	ND	ug/kg	5.0	09/11/03 19:58	HEB	95-49-8		
1,3,5-Trimethylbenzene	ND	ug/kg	5.0	09/11/03 19:58	HEB	108-67-8		
4-Chlorotoluene	ND	ug/kg	5.0	09/11/03 19:58	HEB	106-43-4		
1,2,4-Trimethylbenzene	ND	ug/kg	5.0	09/11/03 19:58	HEB	95-63-6		

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 5029975
Client Project ID: C818 Stanley Tools

Lab Sample No: 502750458 Project Sample Number: 5029975-001 Date Collected: 09/09/03 13:30
Client Sample ID: BF003R Matrix: Soil Date Received: 09/10/03 09:57

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
sec-Butylbenzene	ND	ug/kg	5.0	09/11/03 19:58	HEB	135-98-8		
tert-Butylbenzene	ND	ug/kg	5.0	09/11/03 19:58	HEB	98-06-6		
p-Isopropyltoluene	ND	ug/kg	5.0	09/11/03 19:58	HEB	99-87-6		
1,3-Dichlorobenzene	ND	ug/kg	5.0	09/11/03 19:58	HEB	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	5.0	09/11/03 19:58	HEB	106-46-7		
n-Butylbenzene	ND	ug/kg	5.0	09/11/03 19:58	HEB	104-51-8		
1,2-Dichlorobenzene	ND	ug/kg	5.0	09/11/03 19:58	HEB	95-50-1		
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.0	09/11/03 19:58	HEB	96-12-8		
1,2,4-Trichlorobenzene	ND	ug/kg	5.0	09/11/03 19:58	HEB	120-82-1		
Hexachloro-1,3-butadiene	ND	ug/kg	5.0	09/11/03 19:58	HEB	87-68-3		
Naphthalene	ND	ug/kg	5.0	09/11/03 19:58	HEB	91-20-3		
1,2,3-Trichlorobenzene	ND	ug/kg	5.0	09/11/03 19:58	HEB	87-61-6		
trans-1,3-Dichloropropene	ND	ug/kg	5.0	09/11/03 19:58	HEB	10061-02-6		
cis-1,3-Dichloropropene	ND	ug/kg	5.0	09/11/03 19:58	HEB	10061-01-5		
2-Chloroethylvinyl ether	ND	ug/kg	50.	09/11/03 19:58	HEB	110-75-8		
Acetone	ND	ug/kg	100	09/11/03 19:58	HEB	67-64-1		
2-Butanone (MEK)	ND	ug/kg	10.	09/11/03 19:58	HEB	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	10.	09/11/03 19:58	HEB	108-10-1		
Carbon disulfide	ND	ug/kg	10.	09/11/03 19:58	HEB	75-15-0		
Acrolein	ND	ug/kg	100	09/11/03 19:58	HEB	107-02-8		
Acrylonitrile	ND	ug/kg	100	09/11/03 19:58	HEB	107-13-1		
2-Hexanone	ND	ug/kg	100	09/11/03 19:58	HEB	591-78-6		
Vinyl acetate	ND	ug/kg	100	09/11/03 19:58	HEB	108-05-4		
Iodomethane	ND	ug/kg	100	09/11/03 19:58	HEB	74-88-4		
Methyl-tert-butyl ether	ND	ug/kg	5.0	09/11/03 19:58	HEB	1634-04-4		
Ethyl methacrylate	ND	ug/kg	100	09/11/03 19:58	HEB	97-63-2		
trans-1,4-Dichloro-2-butene	ND	ug/kg	100	09/11/03 19:58	HEB	110-57-6		
Dibromofluoromethane (S)	100	%		09/11/03 19:58	HEB	1868-53-7		
Toluene-d8 (S)	102	%		09/11/03 19:58	HEB	2037-26-5		
4-Bromofluorobenzene (S)	96	%		09/11/03 19:58	HEB	460-00-4		

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Lab Project Number: 5029975
Client Project ID: C818 Stanley Tools

Lab Sample No: 502862105
Client Sample ID: BF003R

Project Sample Number: 5029975-003
Matrix: Water

Date Collected: 09/09/03 13:30
Date Received: 09/10/03 09:57

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Selenium, AAS Furnace	Prep/Method: EPA 3020 / EPA 7740							
Selenium	ND	ug/l	1.00	10/16/03	DMT	7782-49-2		
Date Digested	10/15/03			10/15/03				

Comments : SPLP 1312 for Selenium.

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 5029711
Client Project ID: C818

Lab Sample No: 502719289 Project Sample Number: 5029711-002 Date Collected: 08/27/03 15:21
Client Sample ID: BF004 Matrix: Soil Date Received: 08/28/03 10:16

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Metals, Trace ICP	Prep/Method: EPA 3050 / EPA 6010							
Arsenic	4.16	mg/kg	1.63	09/04/03 13:33	FRW	7440-38-2		
Barium	16.1	mg/kg	1.63	09/04/03 13:33	FRW	7440-39-3		
Cadmium	ND	mg/kg	1.63	09/04/03 13:33	FRW	7440-43-9	2	
Chromium	6.46	mg/kg	1.63	09/04/03 13:33	FRW	7440-47-3		
Copper	7.73	mg/kg	1.63	09/04/03 13:33	FRW	7440-50-8		
Lead	4.17	mg/kg	1.63	09/04/03 13:33	FRW	7439-92-1		
Nickel	7.43	mg/kg	1.63	09/04/03 13:33	FRW	7440-02-0		
Selenium	1.49	J mg/kg	1.63	09/04/03 13:33	FRW	7782-49-2	1	
Zinc	25.2	mg/kg	1.63	09/04/03 13:33	FRW	7440-66-6		
Date Digested	09/03/03			09/03/03				
Mercury, CVAAS	Method: EPA 7471							
Mercury	ND	mg/kg	0.100	08/28/03 12:00	DMT	7439-97-6		
Wet Chemistry								
hromium, Hexavalent, in Soil	Prep/Method: EPA 3060 / EPA 7196 Modified							
Chromium, Hexavalent	ND	mg/kg	3.3	09/26/03 11:00	KSR	18540-29-9	3	
GC/MS Semivolatiles								
Semivolatile Organics	Prep/Method: EPA 3550 Sonication / EPA 8270							
Phenol	ND	ug/kg	330	08/30/03 22:12	KES	108-95-2		
bis(2-Chloroethyl) ether	ND	ug/kg	330	08/30/03 22:12	KES	111-44-4		
2-Chlorophenol	ND	ug/kg	330	08/30/03 22:12	KES	95-57-8		
1,3-Dichlorobenzene	ND	ug/kg	330	08/30/03 22:12	KES	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	330	08/30/03 22:12	KES	106-46-7		
Benzyl alcohol	ND	ug/kg	660	08/30/03 22:12	KES	100-51-6		
1,2-Dichlorobenzene	ND	ug/kg	330	08/30/03 22:12	KES	95-50-1		
2-Methylphenol (o-Cresol)	ND	ug/kg	330	08/30/03 22:12	KES	95-48-7		
bis(2-Chloroisopropyl) ether	ND	ug/kg	330	08/30/03 22:12	KES	39638-32-9		
3&4-Methylphenol	ND	ug/kg	660	08/30/03 22:12	KES			
N-Nitroso-di-n-propylamine	ND	ug/kg	330	08/30/03 22:12	KES	621-64-7		
Hexachloroethane	ND	ug/kg	330	08/30/03 22:12	KES	67-72-1		
Nitrobenzene	ND	ug/kg	330	08/30/03 22:12	KES	98-95-3		
Isophorone	ND	ug/kg	330	08/30/03 22:12	KES	78-59-1		
2-Nitrophenol	ND	ug/kg	330	08/30/03 22:12	KES	88-75-5		
2,4-Dimethylphenol	ND	ug/kg	330	08/30/03 22:12	KES	105-67-9		
Benzoic acid	ND	ug/kg	1600	08/30/03 22:12	KES	65-85-0		

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 5029711
Client Project ID: C818

Lab Sample No: 502719289 Project Sample Number: 5029711-002 Date Collected: 08/27/03 15:21
Client Sample ID: BF004 Matrix: Soil Date Received: 08/28/03 10:16

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
bis(2-Chloroethoxy)methane	ND	ug/kg	330	08/30/03 22:12	KES	111-91-1		
2,4-Dichlorophenol	ND	ug/kg	330	08/30/03 22:12	KES	120-83-2		
1,2,4-Trichlorobenzene	ND	ug/kg	330	08/30/03 22:12	KES	120-82-1		
Naphthalene	ND	ug/kg	330	08/30/03 22:12	KES	91-20-3		
4-Chloroaniline	ND	ug/kg	660	08/30/03 22:12	KES	106-47-8		
Hexachloro-1,3-butadiene	ND	ug/kg	330	08/30/03 22:12	KES	87-68-3		
4-Chloro-3-methylphenol	ND	ug/kg	660	08/30/03 22:12	KES	59-50-7		
2-Methylnaphthalene	ND	ug/kg	330	08/30/03 22:12	KES	91-57-6		
Hexachlorocyclopentadiene	ND	ug/kg	330	08/30/03 22:12	KES	77-47-4		
2,4,6-Trichlorophenol	ND	ug/kg	330	08/30/03 22:12	KES	88-06-2		
2,4,5-Trichlorophenol	ND	ug/kg	330	08/30/03 22:12	KES	95-95-4		
2-Chloronaphthalene	ND	ug/kg	330	08/30/03 22:12	KES	91-58-7		
2-Nitroaniline	ND	ug/kg	1600	08/30/03 22:12	KES	88-74-4		
Dimethylphthalate	ND	ug/kg	330	08/30/03 22:12	KES	131-11-3		
Acenaphthylene	ND	ug/kg	330	08/30/03 22:12	KES	208-96-8		
2,6-Dinitrotoluene	ND	ug/kg	330	08/30/03 22:12	KES	606-20-2		
3-Nitroaniline	ND	ug/kg	1600	08/30/03 22:12	KES	99-09-2		
\cenaphthene	ND	ug/kg	330	08/30/03 22:12	KES	83-32-9		
2,4-Dinitrophenol	ND	ug/kg	1600	08/30/03 22:12	KES	51-28-5		
4-Nitrophenol	ND	ug/kg	1600	08/30/03 22:12	KES	100-02-7		
Dibenzofuran	ND	ug/kg	330	08/30/03 22:12	KES	132-64-9		
2,4-Dinitrotoluene	ND	ug/kg	330	08/30/03 22:12	KES	121-14-2		
Diethylphthalate	ND	ug/kg	330	08/30/03 22:12	KES	84-66-2		
4-Chlorophenylphenyl ether	ND	ug/kg	330	08/30/03 22:12	KES	7005-72-3		
Fluorene	ND	ug/kg	330	08/30/03 22:12	KES	86-73-7		
4-Nitroaniline	ND	ug/kg	1600	08/30/03 22:12	KES	100-01-6		
4,6-Dinitro-2-methylphenol	ND	ug/kg	1600	08/30/03 22:12	KES	534-52-1		
N-Nitrosodiphenylamine	ND	ug/kg	330	08/30/03 22:12	KES	86-30-6		
4-Bromophenylphenyl ether	ND	ug/kg	330	08/30/03 22:12	KES	101-55-3		
Hexachlorobenzene	ND	ug/kg	330	08/30/03 22:12	KES	118-74-1		
Pentachlorophenol	ND	ug/kg	1600	08/30/03 22:12	KES	87-86-5		
Phenanthrene	ND	ug/kg	330	08/30/03 22:12	KES	85-01-8		
Anthracene	ND	ug/kg	330	08/30/03 22:12	KES	120-12-7		
Di-n-butylphthalate	ND	ug/kg	330	08/30/03 22:12	KES	84-74-2		
Fluoranthene	ND	ug/kg	330	08/30/03 22:12	KES	206-44-0		
Pyrene	ND	ug/kg	330	08/30/03 22:12	KES	129-00-0		
Butylbenzylphthalate	ND	ug/kg	330	08/30/03 22:12	KES	85-68-7		
3,3'-Dichlorobenzidine	ND	ug/kg	660	08/30/03 22:12	KES	91-94-1		
Benzo(a)anthracene	ND	ug/kg	330	08/30/03 22:12	KES	56-55-3		

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Lab Project Number: 5029711
Client Project ID: C818

Lab Sample No: 502719289	Project Sample Number: 5029711-002	Date Collected: 08/27/03 15:21
Client Sample ID: BF004	Matrix: Soil	Date Received: 08/28/03 10:16

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Chrysene	ND	ug/kg	330	08/30/03 22:12	KES	218-01-9		
bis(2-Ethylhexyl)phthalate	ND	ug/kg	330	08/30/03 22:12	KES	117-81-7		
Di-n-octylphthalate	ND	ug/kg	330	08/30/03 22:12	KES	117-84-0		
Benzo(b)fluoranthene	ND	ug/kg	330	08/30/03 22:12	KES	205-99-2		
Benzo(k)fluoranthene	ND	ug/kg	330	08/30/03 22:12	KES	207-08-9		
Benzo(a)pyrene	ND	ug/kg	330	08/30/03 22:12	KES	50-32-8		
Indeno(1,2,3-cd)pyrene	ND	ug/kg	330	08/30/03 22:12	KES	193-39-5		
Dibenz(a,h)anthracene	ND	ug/kg	330	08/30/03 22:12	KES	53-70-3		
Benzo(g,h,i)perylene	ND	ug/kg	330	08/30/03 22:12	KES	191-24-2		
Nitrobenzene-d5 (S)	76	%		08/30/03 22:12	KES	4165-60-0		
2-Fluorobiphenyl (S)	88	%		08/30/03 22:12	KES	321-60-8		
Terphenyl-d14 (S)	88	%		08/30/03 22:12	KES	1718-51-0		
Phenol-d6 (S)	77	%		08/30/03 22:12	KES	13127-88-3		
2-Fluorophenol (S)	76	%		08/30/03 22:12	KES	367-12-4		
2,4,6-Tribromophenol (S)	89	%		08/30/03 22:12	KES			
Date Extracted	08/29/03			08/29/03				
Semivolatiles								
CBs in Soil by 8082	Prep/Method: EPA 3550 / EPA 8082							
PCB-1016 (Aroclor 1016)	ND	ug/kg	16.	09/03/03 12:30	MED	12674-11-2		
PCB-1221 (Aroclor 1221)	ND	ug/kg	16.	09/03/03 12:30	MED	11104-28-2		
PCB-1232 (Aroclor 1232)	ND	ug/kg	16.	09/03/03 12:30	MED	11141-16-5		
PCB-1242 (Aroclor 1242)	ND	ug/kg	16.	09/03/03 12:30	MED	53469-21-9		
PCB-1248 (Aroclor 1248)	ND	ug/kg	16.	09/03/03 12:30	MED	12672-29-6		
PCB-1254 (Aroclor 1254)	ND	ug/kg	16.	09/03/03 12:30	MED	11097-69-1		
PCB-1260 (Aroclor 1260)	ND	ug/kg	16.	09/03/03 12:30	MED	11096-82-5		
Decachlorobiphenyl (S)	111	%		09/03/03 12:30	MED	2051-24-3		
Date Extracted	09/02/03			09/02/03				
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Dichlorodifluoromethane	ND	ug/kg	5.0	08/29/03 17:50	TMB	75-71-8		
Chloromethane	ND	ug/kg	5.0	08/29/03 17:50	TMB	74-87-3		
Vinyl chloride	ND	ug/kg	2.0	08/29/03 17:50	TMB	75-01-4		
Bromomethane	ND	ug/kg	5.0	08/29/03 17:50	TMB	74-83-9		
Chloroethane	ND	ug/kg	5.0	08/29/03 17:50	TMB	75-00-3		
Trichlorofluoromethane	ND	ug/kg	5.0	08/29/03 17:50	TMB	75-69-4		
Methylene chloride	ND	ug/kg	20.	08/29/03 17:50	TMB	75-09-2		
1,1-Dichloroethene	ND	ug/kg	5.0	08/29/03 17:50	TMB	75-35-4		

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Lab Project Number: 5029711
Client Project ID: C818

Lab Sample No: 502719289 Project Sample Number: 5029711-002 Date Collected: 08/27/03 15:21
Client Sample ID: BF004 Matrix: Soil Date Received: 08/28/03 10:16

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
trans-1,2-Dichloroethene	ND	ug/kg	5.0	08/29/03 17:50	TMB	156-60-5		
1,1-Dichloroethane	ND	ug/kg	5.0	08/29/03 17:50	TMB	75-34-3		
2,2-Dichloropropane	ND	ug/kg	5.0	08/29/03 17:50	TMB	594-20-7		
cis-1,2-Dichloroethene	ND	ug/kg	5.0	08/29/03 17:50	TMB	156-59-2		
Chloroform	ND	ug/kg	5.0	08/29/03 17:50	TMB	67-66-3		
Bromochloromethane	ND	ug/kg	5.0	08/29/03 17:50	TMB	74-97-5		
1,1,1-Trichloroethane	ND	ug/kg	5.0	08/29/03 17:50	TMB	71-55-6		
Carbon tetrachloride	ND	ug/kg	5.0	08/29/03 17:50	TMB	56-23-5		
1,1-Dichloropropene	ND	ug/kg	5.0	08/29/03 17:50	TMB	563-58-6		
Benzene	ND	ug/kg	5.0	08/29/03 17:50	TMB	71-43-2		
1,2-Dichloroethane	ND	ug/kg	5.0	08/29/03 17:50	TMB	107-06-2		
Trichloroethene	ND	ug/kg	5.0	08/29/03 17:50	TMB	79-01-6		
1,2-Dichloropropane	ND	ug/kg	5.0	08/29/03 17:50	TMB	78-87-5		
Bromodichloromethane	ND	ug/kg	5.0	08/29/03 17:50	TMB	75-27-4		
Dibromomethane	ND	ug/kg	5.0	08/29/03 17:50	TMB	74-95-3		
Toluene	ND	ug/kg	5.0	08/29/03 17:50	TMB	108-88-3		
1,1,2-Trichloroethane	ND	ug/kg	5.0	08/29/03 17:50	TMB	79-00-5		
Tetrachloroethene	ND	ug/kg	5.0	08/29/03 17:50	TMB	127-18-4		
1,3-Dichloropropane	ND	ug/kg	5.0	08/29/03 17:50	TMB	142-28-9		
Dibromochloromethane	ND	ug/kg	5.0	08/29/03 17:50	TMB	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/kg	5.0	08/29/03 17:50	TMB	106-93-4		
Chlorobenzene	ND	ug/kg	5.0	08/29/03 17:50	TMB	108-90-7		
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.0	08/29/03 17:50	TMB	630-20-6		
Ethylbenzene	ND	ug/kg	5.0	08/29/03 17:50	TMB	100-41-4		
m&p-Xylene	ND	ug/kg	5.0	08/29/03 17:50	TMB			
o-Xylene	ND	ug/kg	5.0	08/29/03 17:50	TMB	95-47-6		
Styrene	ND	ug/kg	5.0	08/29/03 17:50	TMB	100-42-5		
Bromoform	ND	ug/kg	5.0	08/29/03 17:50	TMB	75-25-2		
Isopropylbenzene (Cumene)	ND	ug/kg	5.0	08/29/03 17:50	TMB	98-82-8		
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0	08/29/03 17:50	TMB	79-34-5		
Bromobenzene	ND	ug/kg	5.0	08/29/03 17:50	TMB	108-86-1		
1,2,3-Trichloropropane	ND	ug/kg	5.0	08/29/03 17:50	TMB	96-18-4		
n-Propylbenzene	ND	ug/kg	5.0	08/29/03 17:50	TMB	103-65-1		
2-Chlorotoluene	ND	ug/kg	5.0	08/29/03 17:50	TMB	95-49-8		
1,3,5-Trimethylbenzene	ND	ug/kg	5.0	08/29/03 17:50	TMB	108-67-8		
4-Chlorotoluene	ND	ug/kg	5.0	08/29/03 17:50	TMB	106-43-4		
1,2,4-Trimethylbenzene	ND	ug/kg	5.0	08/29/03 17:50	TMB	95-63-6		
sec-Butylbenzene	ND	ug/kg	5.0	08/29/03 17:50	TMB	135-98-8		
tert-Butylbenzene	ND	ug/kg	5.0	08/29/03 17:50	TMB	98-06-6		

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 5029711
Client Project ID: C818

Lab Sample No: 502719289 | Project Sample Number: 5029711-002 | Date Collected: 08/27/03 15:21
Client Sample ID: BF004 | Matrix: Soil | Date Received: 08/28/03 10:16

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
p-Isopropyltoluene	ND	ug/kg	5.0	08/29/03 17:50	TMB	99-87-6		
1,3-Dichlorobenzene	ND	ug/kg	5.0	08/29/03 17:50	TMB	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	5.0	08/29/03 17:50	TMB	106-46-7		
n-Butylbenzene	ND	ug/kg	5.0	08/29/03 17:50	TMB	104-51-8		
1,2-Dichlorobenzene	ND	ug/kg	5.0	08/29/03 17:50	TMB	95-50-1		
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.0	08/29/03 17:50	TMB	96-12-8		
1,2,4-Trichlorobenzene	ND	ug/kg	5.0	08/29/03 17:50	TMB	120-82-1		
Hexachloro-1,3-butadiene	ND	ug/kg	5.0	08/29/03 17:50	TMB	87-68-3		
Naphthalene	ND	ug/kg	5.0	08/29/03 17:50	TMB	91-20-3		
1,2,3-Trichlorobenzene	ND	ug/kg	5.0	08/29/03 17:50	TMB	87-61-6		
trans-1,3-Dichloropropene	ND	ug/kg	5.0	08/29/03 17:50	TMB	10061-02-6		
cis-1,3-Dichloropropene	ND	ug/kg	5.0	08/29/03 17:50	TMB	10061-01-5		
2-Chloroethylvinyl ether	ND	ug/kg	50.	08/29/03 17:50	TMB	110-75-8		
Acetone	ND	ug/kg	100	08/29/03 17:50	TMB	67-64-1		
2-Butanone (MEK)	ND	ug/kg	10.	08/29/03 17:50	TMB	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	10.	08/29/03 17:50	TMB	108-10-1		
Carbon disulfide	ND	ug/kg	10.	08/29/03 17:50	TMB	75-15-0		
Acrolein	ND	ug/kg	100	08/29/03 17:50	TMB	107-02-8		
Acrylonitrile	ND	ug/kg	100	08/29/03 17:50	TMB	107-13-1		
2-Hexanone	ND	ug/kg	100	08/29/03 17:50	TMB	591-78-6		
Vinyl acetate	ND	ug/kg	100	08/29/03 17:50	TMB	108-05-4		
Iodomethane	ND	ug/kg	100	08/29/03 17:50	TMB	74-88-4		
Methyl-tert-butyl ether	ND	ug/kg	5.0	08/29/03 17:50	TMB	1634-04-4		
Ethyl methacrylate	ND	ug/kg	100	08/29/03 17:50	TMB	97-63-2		
trans-1,4-Dichloro-2-butene	ND	ug/kg	100	08/29/03 17:50	TMB	110-57-6		
Dibromofluoromethane (S)	101	%		08/29/03 17:50	TMB	1868-53-7		
Toluene-d8 (S)	104	%		08/29/03 17:50	TMB	2037-26-5		
4-Bromofluorobenzene (S)	94	%		08/29/03 17:50	TMB	460-00-4		

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Lab Project Number: 5030978
Client Project ID: C818 STANLEY TOOLS

Lab Sample No: 502875172
Client Sample ID: BF004
Project Sample Number: 5030978-001
Matrix: Water
Date Collected: 08/27/03 00:00
Date Received: 10/20/03 10:01

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Selenium, AAS Furnace	Prep/Method: EPA 3020 / EPA 7740							
Selenium	ND	ug/l	2.00	10/23/03	DMT	7782-49-2	1	
Date Digested	10/21/03			10/21/03				

Comments : SPLP 1312 for Selenium

Date: 10/23/03

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Lab Project Number: 5029975
Client Project ID: C818 Stanley Tools

Lab Sample No: 502750607 Project Sample Number: 5029975-002 Date Collected: 09/09/03 13:24
Client Sample ID: BF005 Matrix: Soil Date Received: 09/10/03 09:57

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Metals, Trace ICP	Prep/Method: EPA 3050 / EPA 6010							
Arsenic	3.47	mg/kg	1.80	09/11/03 02:36	FRW	7440-38-2		
Barium	10.8	mg/kg	1.80	09/11/03 02:36	FRW	7440-39-3		
Cadmium	ND	mg/kg	1.80	09/11/03 02:36	FRW	7440-43-9	2	
Chromium	6.29	mg/kg	1.80	09/11/03 02:36	FRW	7440-47-3		
Copper	6.58	mg/kg	1.80	09/11/03 02:36	FRW	7440-50-8		
Lead	4.05	mg/kg	1.80	09/11/03 02:36	FRW	7439-92-1		
Nickel	7.35	mg/kg	1.80	09/11/03 02:36	FRW	7440-02-0		
Selenium	0.474	J mg/kg	1.80	09/11/03 02:36	FRW	7782-49-2	1	
Zinc	19.6	mg/kg	1.80	09/11/03 02:36	FRW	7440-66-6		
Date Digested	09/10/03			09/10/03				
Mercury, CVAAS	Method: EPA 7471							
Mercury	ND	mg/kg	0.100	09/11/03	DMT	7439-97-6		
Wet Chemistry								
Chromium, Hexavalent, in Soil	Prep/Method: EPA 3060 / EPA 7196 Modified							
Chromium, Hexavalent	ND	mg/kg	3.3	09/26/03 11:00	KSR	18540-29-9	3	
GC/MS Semivolatiles								
Semivolatile Organics	Prep/Method: EPA 3550 Sonication / EPA 8270							
Phenol	ND	ug/kg	330	09/14/03 22:19	KES	108-95-2		
bis(2-Chloroethyl) ether	ND	ug/kg	330	09/14/03 22:19	KES	111-44-4		
2-Chlorophenol	ND	ug/kg	330	09/14/03 22:19	KES	95-57-8		
1,3-Dichlorobenzene	ND	ug/kg	330	09/14/03 22:19	KES	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	330	09/14/03 22:19	KES	106-46-7		
Benzyl alcohol	ND	ug/kg	660	09/14/03 22:19	KES	100-51-6		
1,2-Dichlorobenzene	ND	ug/kg	330	09/14/03 22:19	KES	95-50-1		
2-Methylphenol (o-Cresol)	ND	ug/kg	330	09/14/03 22:19	KES	95-48-7		
bis(2-Chloroisopropyl) ether	ND	ug/kg	330	09/14/03 22:19	KES	39638-32-9		
3&4-Methylphenol	ND	ug/kg	660	09/14/03 22:19	KES			
N-Nitroso-di-n-propylamine	ND	ug/kg	330	09/14/03 22:19	KES	621-64-7		
Hexachloroethane	ND	ug/kg	330	09/14/03 22:19	KES	67-72-1		
Nitrobenzene	ND	ug/kg	330	09/14/03 22:19	KES	98-95-3		
Isophorone	ND	ug/kg	330	09/14/03 22:19	KES	78-59-1		
2-Nitrophenol	ND	ug/kg	330	09/14/03 22:19	KES	88-75-5		
2,4-Dimethylphenol	ND	ug/kg	330	09/14/03 22:19	KES	105-67-9		
Benzoic acid	ND	ug/kg	1600	09/14/03 22:19	KES	65-85-0		

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Lab Project Number: 5029975
Client Project ID: C818 Stanley Tools

Lab Sample No: 502750607
Client Sample ID: BF005

Project Sample Number: 5029975-002
Matrix: Soil

Date Collected: 09/09/03 13:24
Date Received: 09/10/03 09:57

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
bis(2-Chloroethoxy)methane	ND	ug/kg	330	09/14/03 22:19	KES	111-91-1		
2,4-Dichlorophenol	ND	ug/kg	330	09/14/03 22:19	KES	120-83-2		
1,2,4-Trichlorobenzene	ND	ug/kg	330	09/14/03 22:19	KES	120-82-1		
Naphthalene	ND	ug/kg	330	09/14/03 22:19	KES	91-20-3		
4-Chloroaniline	ND	ug/kg	660	09/14/03 22:19	KES	106-47-8		
Hexachloro-1,3-butadiene	ND	ug/kg	330	09/14/03 22:19	KES	87-68-3		
4-Chloro-3-methylphenol	ND	ug/kg	660	09/14/03 22:19	KES	59-50-7		
2-Methylnaphthalene	ND	ug/kg	330	09/14/03 22:19	KES	91-57-6		
Hexachlorocyclopentadiene	ND	ug/kg	330	09/14/03 22:19	KES	77-47-4		
2,4,6-Trichlorophenol	ND	ug/kg	330	09/14/03 22:19	KES	88-06-2		
2,4,5-Trichlorophenol	ND	ug/kg	330	09/14/03 22:19	KES	95-95-4		
2-Chloronaphthalene	ND	ug/kg	330	09/14/03 22:19	KES	91-58-7		
2-Nitroaniline	ND	ug/kg	1600	09/14/03 22:19	KES	88-74-4		
Dimethylphthalate	ND	ug/kg	330	09/14/03 22:19	KES	131-11-3		
Acenaphthylene	ND	ug/kg	330	09/14/03 22:19	KES	208-96-8		
2,6-Dinitrotoluene	ND	ug/kg	330	09/14/03 22:19	KES	606-20-2		
3-Nitroaniline	ND	ug/kg	1600	09/14/03 22:19	KES	99-09-2		
Acenaphthene	ND	ug/kg	330	09/14/03 22:19	KES	83-32-9		
2,4-Dinitrophenol	ND	ug/kg	1600	09/14/03 22:19	KES	51-28-5		
4-Nitrophenol	ND	ug/kg	1600	09/14/03 22:19	KES	100-02-7		
Dibenzofuran	ND	ug/kg	330	09/14/03 22:19	KES	132-64-9		
2,4-Dinitrotoluene	ND	ug/kg	330	09/14/03 22:19	KES	121-14-2		
Diethylphthalate	ND	ug/kg	330	09/14/03 22:19	KES	84-66-2		
4-Chlorophenylphenyl ether	ND	ug/kg	330	09/14/03 22:19	KES	7005-72-3		
Fluorene	ND	ug/kg	330	09/14/03 22:19	KES	86-73-7		
4-Nitroaniline	ND	ug/kg	1600	09/14/03 22:19	KES	100-01-6		
4,6-Dinitro-2-methylphenol	ND	ug/kg	1600	09/14/03 22:19	KES	534-52-1		
N-Nitrosodiphenylamine	ND	ug/kg	330	09/14/03 22:19	KES	86-30-6		
4-Bromophenylphenyl ether	ND	ug/kg	330	09/14/03 22:19	KES	101-55-3		
Hexachlorobenzene	ND	ug/kg	330	09/14/03 22:19	KES	118-74-1		
Pentachlorophenol	ND	ug/kg	1600	09/14/03 22:19	KES	87-86-5		
Phenanthrene	ND	ug/kg	330	09/14/03 22:19	KES	85-01-8		
Anthracene	ND	ug/kg	330	09/14/03 22:19	KES	120-12-7		
Di-n-butylphthalate	ND	ug/kg	330	09/14/03 22:19	KES	84-74-2		
Fluoranthene	ND	ug/kg	330	09/14/03 22:19	KES	206-44-0		
Pyrene	ND	ug/kg	330	09/14/03 22:19	KES	129-00-0		
Butylbenzylphthalate	ND	ug/kg	330	09/14/03 22:19	KES	85-68-7		
3,3'-Dichlorobenzidine	ND	ug/kg	660	09/14/03 22:19	KES	91-94-1		
Benzo(a)anthracene	ND	ug/kg	330	09/14/03 22:19	KES	56-55-3		

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Lab Project Number: 5029975
Client Project ID: C818 Stanley Tools

Lab Sample No: 502750607 Project Sample Number: 5029975-002 Date Collected: 09/09/03 13:24
Client Sample ID: BF005 Matrix: Soil Date Received: 09/10/03 09:57

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Chrysene	ND	ug/kg	330	09/14/03 22:19	KES	218-01-9		
bis(2-Ethylhexyl)phthalate	ND	ug/kg	330	09/14/03 22:19	KES	117-81-7		
Di-n-octylphthalate	ND	ug/kg	330	09/14/03 22:19	KES	117-84-0		
Benzo(b)fluoranthene	ND	ug/kg	330	09/14/03 22:19	KES	205-99-2		
Benzo(k)fluoranthene	ND	ug/kg	330	09/14/03 22:19	KES	207-08-9		
Benzo(a)pyrene	ND	ug/kg	330	09/14/03 22:19	KES	50-32-8		
Indeno(1,2,3-cd)pyrene	ND	ug/kg	330	09/14/03 22:19	KES	193-39-5		
Dibenz(a,h)anthracene	ND	ug/kg	330	09/14/03 22:19	KES	53-70-3		
Benzo(g,h,i)perylene	ND	ug/kg	330	09/14/03 22:19	KES	191-24-2		
Aniline	ND	ug/kg	330	09/14/03 22:19	KES	62-53-3		
Nitrobenzene-d5 (S)	74	%		09/14/03 22:19	KES	4165-60-0		
2-Fluorobiphenyl (S)	82	%		09/14/03 22:19	KES	321-60-8		
Terphenyl-d14 (S)	71	%		09/14/03 22:19	KES	1718-51-0		
Phenol-d6 (S)	82	%		09/14/03 22:19	KES	13127-88-3		
2-Fluorophenol (S)	78	%		09/14/03 22:19	KES	367-12-4		
2,4,6-Tribromophenol (S)	74	%		09/14/03 22:19	KES			
Date Extracted	09/11/03			09/11/03				
Semivolatiles								
PCBs in Soil by 8082	Prep/Method: EPA 3550 / EPA 8082							
PCB-1016 (Aroclor 1016)	ND	ug/kg	16.	09/10/03 19:21	MED	12674-11-2		
PCB-1221 (Aroclor 1221)	ND	ug/kg	16.	09/10/03 19:21	MED	11104-28-2		
PCB-1232 (Aroclor 1232)	ND	ug/kg	16.	09/10/03 19:21	MED	11141-16-5		
PCB-1242 (Aroclor 1242)	ND	ug/kg	16.	09/10/03 19:21	MED	53469-21-9		
PCB-1248 (Aroclor 1248)	ND	ug/kg	16.	09/10/03 19:21	MED	12672-29-6		
PCB-1254 (Aroclor 1254)	ND	ug/kg	16.	09/10/03 19:21	MED	11097-69-1		
PCB-1260 (Aroclor 1260)	ND	ug/kg	16.	09/10/03 19:21	MED	11096-82-5		
Decachlorobiphenyl (S)	103	%		09/10/03 19:21	MED	2051-24-3		
Date Extracted	09/10/03 14:30			09/10/03 14:30				
GC/MS Volatiles								
GC/MS VOCs by 8260	Prep/Method: EPA 5030 / EPA 8260							
Dichlorodifluoromethane	ND	ug/kg	5.0	09/11/03 19:27	HEB	75-71-8		
Chloromethane	ND	ug/kg	5.0	09/11/03 19:27	HEB	74-87-3		
Vinyl chloride	ND	ug/kg	2.0	09/11/03 19:27	HEB	75-01-4		
Bromomethane	ND	ug/kg	5.0	09/11/03 19:27	HEB	74-83-9		
Chloroethane	ND	ug/kg	5.0	09/11/03 19:27	HEB	75-00-3		
Trichlorofluoromethane	ND	ug/kg	5.0	09/11/03 19:27	HEB	75-69-4		
Methylene chloride	ND	ug/kg	20.	09/11/03 19:27	HEB	75-09-2		

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Lab Project Number: 5029975
Client Project ID: C818 Stanley Tools

Lab Sample No: 502750607 Project Sample Number: 5029975-002 Date Collected: 09/09/03 13:24
Client Sample ID: BF005 Matrix: Soil Date Received: 09/10/03 09:57

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
1,1-Dichloroethene	ND	ug/kg	5.0	09/11/03 19:27	HEB	75-35-4		
trans-1,2-Dichloroethene	ND	ug/kg	5.0	09/11/03 19:27	HEB	156-60-5		
1,1-Dichloroethane	ND	ug/kg	5.0	09/11/03 19:27	HEB	75-34-3		
2,2-Dichloropropane	ND	ug/kg	5.0	09/11/03 19:27	HEB	594-20-7		
cis-1,2-Dichloroethene	ND	ug/kg	5.0	09/11/03 19:27	HEB	156-59-2		
Chloroform	ND	ug/kg	5.0	09/11/03 19:27	HEB	67-66-3		
Bromochloromethane	ND	ug/kg	5.0	09/11/03 19:27	HEB	74-97-5		
1,1,1-Trichloroethane	ND	ug/kg	5.0	09/11/03 19:27	HEB	71-55-6		
Carbon tetrachloride	ND	ug/kg	5.0	09/11/03 19:27	HEB	56-23-5		
1,1-Dichloropropene	ND	ug/kg	5.0	09/11/03 19:27	HEB	563-58-6		
Benzene	ND	ug/kg	5.0	09/11/03 19:27	HEB	71-43-2		
1,2-Dichloroethane	ND	ug/kg	5.0	09/11/03 19:27	HEB	107-06-2		
Trichloroethene	ND	ug/kg	5.0	09/11/03 19:27	HEB	79-01-6		
1,2-Dichloropropane	ND	ug/kg	5.0	09/11/03 19:27	HEB	78-87-5		
Bromodichloromethane	ND	ug/kg	5.0	09/11/03 19:27	HEB	75-27-4		
Dibromomethane	ND	ug/kg	5.0	09/11/03 19:27	HEB	74-95-3		
Toluene	ND	ug/kg	5.0	09/11/03 19:27	HEB	108-88-3		
1,1,2-Trichloroethane	ND	ug/kg	5.0	09/11/03 19:27	HEB	79-00-5		
Tetrachloroethene	ND	ug/kg	5.0	09/11/03 19:27	HEB	127-18-4		
1,3-Dichloropropane	ND	ug/kg	5.0	09/11/03 19:27	HEB	142-28-9		
Dibromochloromethane	ND	ug/kg	5.0	09/11/03 19:27	HEB	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/kg	5.0	09/11/03 19:27	HEB	106-93-4		
Chlorobenzene	ND	ug/kg	5.0	09/11/03 19:27	HEB	108-90-7		
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.0	09/11/03 19:27	HEB	630-20-6		
Ethylbenzene	ND	ug/kg	5.0	09/11/03 19:27	HEB	100-41-4		
m&p-Xylene	ND	ug/kg	5.0	09/11/03 19:27	HEB			
o-Xylene	ND	ug/kg	5.0	09/11/03 19:27	HEB	95-47-6		
Styrene	ND	ug/kg	5.0	09/11/03 19:27	HEB	100-42-5		
Bromoform	ND	ug/kg	5.0	09/11/03 19:27	HEB	75-25-2		
Isopropylbenzene (Cumene)	ND	ug/kg	5.0	09/11/03 19:27	HEB	98-82-8		
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0	09/11/03 19:27	HEB	79-34-5		
Bromobenzene	ND	ug/kg	5.0	09/11/03 19:27	HEB	108-86-1		
1,2,3-Trichloropropane	ND	ug/kg	5.0	09/11/03 19:27	HEB	96-18-4		
n-Propylbenzene	ND	ug/kg	5.0	09/11/03 19:27	HEB	103-65-1		
2-Chlorotoluene	ND	ug/kg	5.0	09/11/03 19:27	HEB	95-49-8		
1,3,5-Trimethylbenzene	ND	ug/kg	5.0	09/11/03 19:27	HEB	108-67-8		
4-Chlorotoluene	ND	ug/kg	5.0	09/11/03 19:27	HEB	106-43-4		
1,2,4-Trimethylbenzene	ND	ug/kg	5.0	09/11/03 19:27	HEB	95-63-6		
sec-Butylbenzene	ND	ug/kg	5.0	09/11/03 19:27	HEB	135-98-8		

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Lab Project Number: 5029975
Client Project ID: C818 Stanley Tools

Lab Sample No: 502750607 Project Sample Number: 5029975-002 Date Collected: 09/09/03 13:24
Client Sample ID: BF005 Matrix: Soil Date Received: 09/10/03 09:57

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
tert-Butylbenzene	ND	ug/kg	5.0	09/11/03 19:27	HEB	98-06-6		
p-Isopropyltoluene	ND	ug/kg	5.0	09/11/03 19:27	HEB	99-87-6		
1,3-Dichlorobenzene	ND	ug/kg	5.0	09/11/03 19:27	HEB	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	5.0	09/11/03 19:27	HEB	106-46-7		
n-Butylbenzene	ND	ug/kg	5.0	09/11/03 19:27	HEB	104-51-8		
1,2-Dichlorobenzene	ND	ug/kg	5.0	09/11/03 19:27	HEB	95-50-1		
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.0	09/11/03 19:27	HEB	96-12-8		
1,2,4-Trichlorobenzene	ND	ug/kg	5.0	09/11/03 19:27	HEB	120-82-1		
Hexachloro-1,3-butadiene	ND	ug/kg	5.0	09/11/03 19:27	HEB	87-68-3		
Naphthalene	ND	ug/kg	5.0	09/11/03 19:27	HEB	91-20-3		
1,2,3-Trichlorobenzene	ND	ug/kg	5.0	09/11/03 19:27	HEB	87-61-6		
trans-1,3-Dichloropropene	ND	ug/kg	5.0	09/11/03 19:27	HEB	10061-02-6		
cis-1,3-Dichloropropene	ND	ug/kg	5.0	09/11/03 19:27	HEB	10061-01-5		
2-Chloroethylvinyl ether	ND	ug/kg	50.	09/11/03 19:27	HEB	110-75-8		
Acetone	ND	ug/kg	100	09/11/03 19:27	HEB	67-64-1		
2-Butanone (MEK)	ND	ug/kg	10.	09/11/03 19:27	HEB	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	10.	09/11/03 19:27	HEB	108-10-1		
arbon disulfide	ND	ug/kg	10.	09/11/03 19:27	HEB	75-15-0		
crolein	ND	ug/kg	100	09/11/03 19:27	HEB	107-02-8		
Acrylonitrile	ND	ug/kg	100	09/11/03 19:27	HEB	107-13-1		
2-Hexanone	ND	ug/kg	100	09/11/03 19:27	HEB	591-78-6		
Vinyl acetate	ND	ug/kg	100	09/11/03 19:27	HEB	108-05-4		
Iodomethane	ND	ug/kg	100	09/11/03 19:27	HEB	74-88-4		
Methyl-tert-butyl ether	ND	ug/kg	5.0	09/11/03 19:27	HEB	1634-04-4		
Ethyl methacrylate	ND	ug/kg	100	09/11/03 19:27	HEB	97-63-2		
trans-1,4-Dichloro-2-butene	ND	ug/kg	100	09/11/03 19:27	HEB	110-57-6		
Dibromofluoromethane (S)	100	%		09/11/03 19:27	HEB	1868-53-7		
Toluene-d8 (S)	101	%		09/11/03 19:27	HEB	2037-26-5		
4-Bromofluorobenzene (S)	97	%		09/11/03 19:27	HEB	460-00-4		

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Lab Project Number: 5029975
Client Project ID: C818 Stanley Tools

Lab Sample No: 502862113 Project Sample Number: 5029975-004 Date Collected: 09/09/03 13:24
Client Sample ID: BF005 Matrix: Water Date Received: 09/10/03 09:57

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Selenium, AAS Furnace	Prep/Method: EPA 3020 / EPA 7740							
Selenium	ND	ug/l	1.00	10/16/03	DMT	7782-49-2		
Date Digested	10/15/03			10/15/03				

Comments : SPLP 1312 for Selenium.

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 5030380
Client Project ID: C818 Stanley Tools

Solid results are reported on a wet weight basis

Lab Sample No: 502802762 Project Sample Number: 5030380-001 Date Collected: 09/24/03 11:35
Client Sample ID: CL001 Matrix: Soil Date Received: 09/25/03 08:54

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Metals, Trace ICP	Prep/Method: EPA 3050 / EPA 6010							
Arsenic	7.42	mg/kg	1.89	09/26/03 22:07	FRW	7440-38-2		
Barium	54.2	mg/kg	1.89	09/26/03 22:07	FRW	7440-39-3		
Cadmium	ND	mg/kg	1.89	09/26/03 22:07	FRW	7440-43-9		
Chromium	13.5	mg/kg	1.89	09/26/03 22:07	FRW	7440-47-3		
Copper	17.6	mg/kg	1.89	09/26/03 22:07	FRW	7440-50-8		
Lead	7.50	mg/kg	1.89	09/26/03 22:07	FRW	7439-92-1		
Nickel	22.5	mg/kg	1.89	09/26/03 22:07	FRW	7440-02-0		
Selenium	1.86	J mg/kg	1.89	09/26/03 22:07	FRW	7782-49-2	1	
Silver	ND	mg/kg	1.89	09/26/03 22:07	FRW	7440-22-4	2	
Zinc	44.5	mg/kg	1.89	09/26/03 22:07	FRW	7440-66-6		
Date Digested	09/25/03			09/25/03				
Wet Chemistry								
Chromium, Hexavalent, in Soil	Prep/Method: EPA 3060 / EPA 7196 Modified							
'hromium, Hexavalent	ND	mg/kg	9.84	09/26/03 11:00	KSR	18540-29-9	3	
Cyanide, Total, Soil	Method: EPA 9012							
Cyanide	ND	mg/kg	10.0	09/26/03 12:49	CLS	57-12-5	4	
GC/MS Semivolatiles								
Semivolatile Organics	Prep/Method: EPA 3550 Sonication / EPA 8270							
Phenol	ND	ug/kg	330	09/28/03 17:46	KES	108-95-2		
bis(2-Chloroethyl) ether	ND	ug/kg	330	09/28/03 17:46	KES	111-44-4		
2-Chlorophenol	ND	ug/kg	330	09/28/03 17:46	KES	95-57-8		
1,3-Dichlorobenzene	ND	ug/kg	330	09/28/03 17:46	KES	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	330	09/28/03 17:46	KES	106-46-7		
Benzyl alcohol	ND	ug/kg	660	09/28/03 17:46	KES	100-51-6		
1,2-Dichlorobenzene	ND	ug/kg	330	09/28/03 17:46	KES	95-50-1		
2-Methylphenol (o-Cresol)	ND	ug/kg	330	09/28/03 17:46	KES	95-48-7		
bis(2-Chloroisopropyl) ether	ND	ug/kg	330	09/28/03 17:46	KES	39638-32-9		
3&4-Methylphenol	ND	ug/kg	660	09/28/03 17:46	KES			
N-Nitroso-di-n-propylamine	ND	ug/kg	330	09/28/03 17:46	KES	621-64-7		
Hexachloroethane	ND	ug/kg	330	09/28/03 17:46	KES	67-72-1		
Nitrobenzene	ND	ug/kg	330	09/28/03 17:46	KES	98-95-3		
Isophorone	ND	ug/kg	330	09/28/03 17:46	KES	78-59-1		
2-Nitrophenol	ND	ug/kg	330	09/28/03 17:46	KES	88-75-5		

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 5030380
Client Project ID: C818 Stanley Tools

Lab Sample No: 502802762
Client Sample ID: CL001

Project Sample Number: 5030380-001
Matrix: Soil

Date Collected: 09/24/03 11:35
Date Received: 09/25/03 08:54

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
2,4-Dimethylphenol	ND	ug/kg	330	09/28/03 17:46	KES	105-67-9		
Benzoic acid	ND	ug/kg	1600	09/28/03 17:46	KES	65-85-0		
bis(2-Chloroethoxy)methane	ND	ug/kg	330	09/28/03 17:46	KES	111-91-1		
2,4-Dichlorophenol	ND	ug/kg	330	09/28/03 17:46	KES	120-83-2		
1,2,4-Trichlorobenzene	ND	ug/kg	330	09/28/03 17:46	KES	120-82-1		
Naphthalene	ND	ug/kg	330	09/28/03 17:46	KES	91-20-3		
4-Chloroaniline	ND	ug/kg	660	09/28/03 17:46	KES	106-47-8		
Hexachloro-1,3-butadiene	ND	ug/kg	330	09/28/03 17:46	KES	87-68-3		
4-Chloro-3-methylphenol	ND	ug/kg	660	09/28/03 17:46	KES	59-50-7		
2-Methylnaphthalene	ND	ug/kg	330	09/28/03 17:46	KES	91-57-6		
Hexachlorocyclopentadiene	ND	ug/kg	330	09/28/03 17:46	KES	77-47-4		
2,4,6-Trichlorophenol	ND	ug/kg	330	09/28/03 17:46	KES	88-06-2		
2,4,5-Trichlorophenol	ND	ug/kg	330	09/28/03 17:46	KES	95-95-4		
2-Chloronaphthalene	ND	ug/kg	330	09/28/03 17:46	KES	91-58-7		
2-Nitroaniline	ND	ug/kg	1600	09/28/03 17:46	KES	88-74-4		
Dimethylphthalate	ND	ug/kg	330	09/28/03 17:46	KES	131-11-3		
Acenaphthylene	ND	ug/kg	330	09/28/03 17:46	KES	208-96-8		
,6-Dinitrotoluene	ND	ug/kg	330	09/28/03 17:46	KES	606-20-2		
-Nitroaniline	ND	ug/kg	1600	09/28/03 17:46	KES	99-09-2		
Acenaphthene	ND	ug/kg	330	09/28/03 17:46	KES	83-32-9		
2,4-Dinitrophenol	ND	ug/kg	1600	09/28/03 17:46	KES	51-28-5		
4-Nitrophenol	ND	ug/kg	1600	09/28/03 17:46	KES	100-02-7		
Dibenzofuran	ND	ug/kg	330	09/28/03 17:46	KES	132-64-9		
2,4-Dinitrotoluene	ND	ug/kg	330	09/28/03 17:46	KES	121-14-2		
Diethylphthalate	ND	ug/kg	330	09/28/03 17:46	KES	84-66-2		
4-Chlorophenylphenyl ether	ND	ug/kg	330	09/28/03 17:46	KES	7005-72-3		
Fluorene	ND	ug/kg	330	09/28/03 17:46	KES	86-73-7		
4-Nitroaniline	ND	ug/kg	1600	09/28/03 17:46	KES	100-01-6		
4,6-Dinitro-2-methylphenol	ND	ug/kg	1600	09/28/03 17:46	KES	534-52-1		
N-Nitrosodiphenylamine	ND	ug/kg	330	09/28/03 17:46	KES	86-30-6		
4-Bromophenylphenyl ether	ND	ug/kg	330	09/28/03 17:46	KES	101-55-3		
Hexachlorobenzene	ND	ug/kg	330	09/28/03 17:46	KES	118-74-1		
Pentachlorophenol	ND	ug/kg	1600	09/28/03 17:46	KES	87-86-5		
Phenanthrene	ND	ug/kg	330	09/28/03 17:46	KES	85-01-8		
Anthracene	ND	ug/kg	330	09/28/03 17:46	KES	120-12-7		
Di-n-butylphthalate	ND	ug/kg	330	09/28/03 17:46	KES	84-74-2		
Fluoranthene	ND	ug/kg	330	09/28/03 17:46	KES	206-44-0		
Pyrene	ND	ug/kg	330	09/28/03 17:46	KES	129-00-0		
Butylbenzylphthalate	ND	ug/kg	330	09/28/03 17:46	KES	85-68-7		

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 5030380
Client Project ID: C818 Stanley Tools

Lab Sample No: 502802762 Project Sample Number: 5030380-001 Date Collected: 09/24/03 11:35
Client Sample ID: CL001 Matrix: Soil Date Received: 09/25/03 08:54

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
3,3'-Dichlorobenzidine	ND	ug/kg	660	09/28/03 17:46	KES	91-94-1		
Benzo(a)anthracene	ND	ug/kg	330	09/28/03 17:46	KES	56-55-3		
Chrysene	ND	ug/kg	330	09/28/03 17:46	KES	218-01-9		
bis(2-Ethylhexyl)phthalate	ND	ug/kg	330	09/28/03 17:46	KES	117-81-7		
Di-n-octylphthalate	ND	ug/kg	330	09/28/03 17:46	KES	117-84-0		
Benzo(b)fluoranthene	ND	ug/kg	330	09/28/03 17:46	KES	205-99-2		
Benzo(k)fluoranthene	ND	ug/kg	330	09/28/03 17:46	KES	207-08-9		
Benzo(a)pyrene	ND	ug/kg	330	09/28/03 17:46	KES	50-32-8		
Indeno(1,2,3-cd)pyrene	ND	ug/kg	330	09/28/03 17:46	KES	193-39-5		
Dibenz(a,h)anthracene	ND	ug/kg	330	09/28/03 17:46	KES	53-70-3		
Benzo(g,h,i)perylene	ND	ug/kg	330	09/28/03 17:46	KES	191-24-2		
Aniline	ND	ug/kg	330	09/28/03 17:46	KES	62-53-3		
Nitrobenzene-d5 (S)	89	%		09/28/03 17:46	KES	4165-60-0		
2-Fluorobiphenyl (S)	93	%		09/28/03 17:46	KES	321-60-8		
Terphenyl-d14 (S)	91	%		09/28/03 17:46	KES	1718-51-0		
Phenol-d6 (S)	88	%		09/28/03 17:46	KES	13127-88-3		
2-Fluorophenol (S)	86	%		09/28/03 17:46	KES	367-12-4		
?,4,6-Tribromophenol (S)	72	%		09/28/03 17:46	KES			
)ate Extracted	09/26/03			09/26/03				

GC Semivolatiles

PCBs in Soil by 8082 — Prep/Method: EPA 3550 / EPA 8082

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
PCB-1016 (Aroclor 1016)	ND	ug/kg	16.	09/26/03 17:28	MED	12674-11-2		
PCB-1221 (Aroclor 1221)	ND	ug/kg	16.	09/26/03 17:28	MED	11104-28-2		
PCB-1232 (Aroclor 1232)	ND	ug/kg	16.	09/26/03 17:28	MED	11141-16-5		
PCB-1242 (Aroclor 1242)	ND	ug/kg	16.	09/26/03 17:28	MED	53469-21-9		
PCB-1248 (Aroclor 1248)	ND	ug/kg	16.	09/26/03 17:28	MED	12672-29-6		
PCB-1254 (Aroclor 1254)	ND	ug/kg	16.	09/26/03 17:28	MED	11097-69-1		
PCB-1260 (Aroclor 1260)	ND	ug/kg	16.	09/26/03 17:28	MED	11096-82-5		
Decachlorobiphenyl (S)	80	%		09/26/03 17:28	MED	2051-24-3		
Date Extracted	09/26/03			09/26/03				

GC/MS Volatiles

GC/MS VOCs by 8260 — Prep/Method: EPA 5030 / EPA 8260

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Dichlorodifluoromethane	ND	ug/kg	5.0	09/25/03 22:21	HEB	75-71-8		
Chloromethane	ND	ug/kg	5.0	09/25/03 22:21	HEB	74-87-3		
Vinyl chloride	ND	ug/kg	2.0	09/25/03 22:21	HEB	75-01-4		
Bromomethane	ND	ug/kg	5.0	09/25/03 22:21	HEB	74-83-9		
Chloroethane	ND	ug/kg	5.0	09/25/03 22:21	HEB	75-00-3		

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Lab Project Number: 5030380
Client Project ID: C818 Stanley Tools

Lab Sample No: 502802762 Project Sample Number: 5030380-001 Date Collected: 09/24/03 11:35
Client Sample ID: CL001 Matrix: Soil Date Received: 09/25/03 08:54

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Trichlorofluoromethane	ND	ug/kg	5.0	09/25/03 22:21	HEB	75-69-4		
Methylene chloride	ND	ug/kg	20.	09/25/03 22:21	HEB	75-09-2		
1,1-Dichloroethene	ND	ug/kg	5.0	09/25/03 22:21	HEB	75-35-4		
trans-1,2-Dichloroethene	ND	ug/kg	5.0	09/25/03 22:21	HEB	156-60-5		
1,1-Dichloroethane	ND	ug/kg	5.0	09/25/03 22:21	HEB	75-34-3		
2,2-Dichloropropane	ND	ug/kg	5.0	09/25/03 22:21	HEB	594-20-7		
cis-1,2-Dichloroethene	ND	ug/kg	5.0	09/25/03 22:21	HEB	156-59-2		
Chloroform	ND	ug/kg	5.0	09/25/03 22:21	HEB	67-66-3		
Bromochloromethane	ND	ug/kg	5.0	09/25/03 22:21	HEB	74-97-5		
1,1,1-Trichloroethane	ND	ug/kg	5.0	09/25/03 22:21	HEB	71-55-6		
Carbon tetrachloride	ND	ug/kg	5.0	09/25/03 22:21	HEB	56-23-5		
1,1-Dichloropropene	ND	ug/kg	5.0	09/25/03 22:21	HEB	563-58-6		
Benzene	ND	ug/kg	5.0	09/25/03 22:21	HEB	71-43-2		
1,2-Dichloroethane	ND	ug/kg	5.0	09/25/03 22:21	HEB	107-06-2		
Trichloroethene	ND	ug/kg	5.0	09/25/03 22:21	HEB	79-01-6		
1,2-Dichloropropane	ND	ug/kg	5.0	09/25/03 22:21	HEB	78-87-5		
Bromodichloromethane	ND	ug/kg	5.0	09/25/03 22:21	HEB	75-27-4		
Dibromomethane	ND	ug/kg	5.0	09/25/03 22:21	HEB	74-95-3		
Toluene	ND	ug/kg	5.0	09/25/03 22:21	HEB	108-88-3		
1,1,2-Trichloroethane	ND	ug/kg	5.0	09/25/03 22:21	HEB	79-00-5		
Tetrachloroethene	ND	ug/kg	5.0	09/25/03 22:21	HEB	127-18-4		
1,3-Dichloropropane	ND	ug/kg	5.0	09/25/03 22:21	HEB	142-28-9		
Dibromochloromethane	ND	ug/kg	5.0	09/25/03 22:21	HEB	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/kg	5.0	09/25/03 22:21	HEB	106-93-4		
Chlorobenzene	ND	ug/kg	5.0	09/25/03 22:21	HEB	108-90-7		
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.0	09/25/03 22:21	HEB	630-20-6		
Ethylbenzene	ND	ug/kg	5.0	09/25/03 22:21	HEB	100-41-4		
m&p-Xylene	ND	ug/kg	5.0	09/25/03 22:21	HEB			
o-Xylene	ND	ug/kg	5.0	09/25/03 22:21	HEB	95-47-6		
Styrene	ND	ug/kg	5.0	09/25/03 22:21	HEB	100-42-5		
Bromoform	ND	ug/kg	5.0	09/25/03 22:21	HEB	75-25-2		
Isopropylbenzene (Cumene)	ND	ug/kg	5.0	09/25/03 22:21	HEB	98-82-8		
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0	09/25/03 22:21	HEB	79-34-5		
Bromobenzene	ND	ug/kg	5.0	09/25/03 22:21	HEB	108-86-1		
1,2,3-Trichloropropane	ND	ug/kg	5.0	09/25/03 22:21	HEB	96-18-4		
n-Propylbenzene	ND	ug/kg	5.0	09/25/03 22:21	HEB	103-65-1		
2-Chlorotoluene	ND	ug/kg	5.0	09/25/03 22:21	HEB	95-49-8		
1,3,5-Trimethylbenzene	ND	ug/kg	5.0	09/25/03 22:21	HEB	108-67-8		
4-Chlorotoluene	ND	ug/kg	5.0	09/25/03 22:21	HEB	106-43-4		

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Lab Project Number: 5030380
Client Project ID: C818 Stanley Tools

Lab Sample No: 502802762 Project Sample Number: 5030380-001 Date Collected: 09/24/03 11:35
Client Sample ID: CL001 Matrix: Soil Date Received: 09/25/03 08:54

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
1,2,4-Trimethylbenzene	ND	ug/kg	5.0	09/25/03 22:21	HEB	95-63-6		
sec-Butylbenzene	ND	ug/kg	5.0	09/25/03 22:21	HEB	135-98-8		
tert-Butylbenzene	ND	ug/kg	5.0	09/25/03 22:21	HEB	98-06-6		
p-Isopropyltoluene	ND	ug/kg	5.0	09/25/03 22:21	HEB	99-87-6		
1,3-Dichlorobenzene	ND	ug/kg	5.0	09/25/03 22:21	HEB	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	5.0	09/25/03 22:21	HEB	106-46-7		
n-Butylbenzene	ND	ug/kg	5.0	09/25/03 22:21	HEB	104-51-8		
1,2-Dichlorobenzene	ND	ug/kg	5.0	09/25/03 22:21	HEB	95-50-1		
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.0	09/25/03 22:21	HEB	96-12-8		
1,2,4-Trichlorobenzene	ND	ug/kg	5.0	09/25/03 22:21	HEB	120-82-1		
Hexachloro-1,3-butadiene	ND	ug/kg	5.0	09/25/03 22:21	HEB	87-68-3		
Naphthalene	ND	ug/kg	5.0	09/25/03 22:21	HEB	91-20-3		
1,2,3-Trichlorobenzene	ND	ug/kg	5.0	09/25/03 22:21	HEB	87-61-6		
trans-1,3-Dichloropropene	ND	ug/kg	5.0	09/25/03 22:21	HEB	10061-02-6		
cis-1,3-Dichloropropene	ND	ug/kg	5.0	09/25/03 22:21	HEB	10061-01-5		
2-Chloroethylvinyl ether	ND	ug/kg	50.	09/25/03 22:21	HEB	110-75-8		
Acetone	ND	ug/kg	100	09/25/03 22:21	HEB	67-64-1		
`-Butanone (MEK)	ND	ug/kg	10.	09/25/03 22:21	HEB	78-93-3		
-Methyl-2-pentanone (MIBK)	ND	ug/kg	10.	09/25/03 22:21	HEB	108-10-1		
Carbon disulfide	ND	ug/kg	10.	09/25/03 22:21	HEB	75-15-0		
Acrolein	ND	ug/kg	100	09/25/03 22:21	HEB	107-02-8		
Acrylonitrile	ND	ug/kg	100	09/25/03 22:21	HEB	107-13-1		
2-Hexanone	ND	ug/kg	100	09/25/03 22:21	HEB	591-78-6		
Vinyl acetate	ND	ug/kg	100	09/25/03 22:21	HEB	108-05-4		
Iodomethane	ND	ug/kg	100	09/25/03 22:21	HEB	74-88-4		
Methyl-tert-butyl ether	ND	ug/kg	5.0	09/25/03 22:21	HEB	1634-04-4		
Ethyl methacrylate	ND	ug/kg	100	09/25/03 22:21	HEB	97-63-2		
trans-1,4-Dichloro-2-butene	ND	ug/kg	100	09/25/03 22:21	HEB	110-57-6		
Dibromofluoromethane (S)	101	%		09/25/03 22:21	HEB	1868-53-7		
Toluene-d8 (S)	107	%		09/25/03 22:21	HEB	2037-26-5		
4-Bromofluorobenzene (S)	87	%		09/25/03 22:21	HEB	460-00-4		

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Lab Project Number: 5030380
Client Project ID: C818 Stanley Tools

Lab Sample No: 502843246
Client Sample ID: CL001 SPLP

Project Sample Number: 5030380-002
Matrix: Water

Date Collected: 09/24/03 11:35
Date Received: 09/25/03 08:54

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Selenium, AAS Furnace	Prep/Method: EPA 3020 / EPA 7740							
Selenium	1.32	J ug/l	2.00	10/08/03 20:06	DDM	7782-49-2	1	
Date Digested	10/08/03			10/08/03				

Comments : SPLP 1312 for Selenium.

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Lab Project Number: 5030169
Client Project ID: C818 Stanley Tools

Solid results are reported on a wet weight basis

Lab Sample No: 502775901 Project Sample Number: 5030169-001 Date Collected: 09/16/03 08:35
Client Sample ID: TS001 Matrix: Soil Date Received: 09/17/03 09:41

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Metals, Trace ICP	Prep/Method: EPA 3050 / EPA 6010							
Arsenic	2.80	mg/kg	1.83	09/19/03 22:33	FRW	7440-38-2		
Barium	42.9	mg/kg	1.83	09/19/03 22:33	FRW	7440-39-3		
Cadmium	ND	mg/kg	1.83	09/19/03 22:33	FRW	7440-43-9		
Chromium	10.5	mg/kg	1.83	09/19/03 22:33	FRW	7440-47-3		
Copper	7.38	mg/kg	1.83	09/19/03 22:33	FRW	7440-50-8		
Lead	9.19	mg/kg	1.83	09/19/03 22:33	FRW	7439-92-1		
Nickel	8.98	mg/kg	1.83	09/19/03 22:33	FRW	7440-02-0		
Selenium	0.997 J	mg/kg	1.83	09/19/03 22:33	FRW	7782-49-2	1	
Silver	ND	mg/kg	1.83	09/19/03 22:33	FRW	7440-22-4	2	
Zinc	28.6	mg/kg	1.83	09/19/03 22:33	FRW	7440-66-6		
Date Digested	09/18/03			09/18/03				
Mercury, CVAAS	Method: EPA 7471							
Mercury	ND	mg/kg	0.100	09/23/03	DMT	7439-97-6		
,c Chemistry								
Chromium, Hexavalent, in Soil	Prep/Method: EPA 3060 / EPA 7196 Modified							
Chromium, Hexavalent	ND	mg/kg	10.0	09/26/03 11:00	KSR	18540-29-9	3	
Cyanide, Total, Soil	Method: EPA 9012							
Cyanide	ND	mg/kg	10.0	09/24/03	CLS	57-12-5	4	
pH, Soil	Method: EPA 9045							
pH	6.57			09/18/03 11:00	KSR			
Fixed Volatile Solids	Method: SM 2540G							
Volatile Solids	5.40	%	1.00	09/22/03 09:30	KSR			
GC/MS Semivolatiles								
Semivolatile Organics	Prep/Method: EPA 3550 Sonication / EPA 8270							
Phenol	ND	ug/kg	330	09/18/03 19:04	KES	108-95-2		
bis(2-Chloroethyl) ether	ND	ug/kg	330	09/18/03 19:04	KES	111-44-4		
2-Chlorophenol	ND	ug/kg	330	09/18/03 19:04	KES	95-57-8		
1,3-Dichlorobenzene	ND	ug/kg	330	09/18/03 19:04	KES	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	330	09/18/03 19:04	KES	106-46-7		
Benzyl alcohol	ND	ug/kg	660	09/18/03 19:04	KES	100-51-6		

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 5030169
Client Project ID: C818 Stanley Tools

Lab Sample No: 502775901 Project Sample Number: 5030169-001 Date Collected: 09/16/03 08:35
Client Sample ID: TS001 Matrix: Soil Date Received: 09/17/03 09:41

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
1,2-Dichlorobenzene	ND	ug/kg	330	09/18/03 19:04	KES	95-50-1		
2-Methylphenol (o-Cresol)	ND	ug/kg	330	09/18/03 19:04	KES	95-48-7		
bis(2-Chloroisopropyl) ether	ND	ug/kg	330	09/18/03 19:04	KES	39638-32-9		
3&4-Methylphenol	ND	ug/kg	660	09/18/03 19:04	KES			
N-Nitroso-di-n-propylamine	ND	ug/kg	330	09/18/03 19:04	KES	621-64-7		
Hexachloroethane	ND	ug/kg	330	09/18/03 19:04	KES	67-72-1		
Nitrobenzene	ND	ug/kg	330	09/18/03 19:04	KES	98-95-3		
Isophorone	ND	ug/kg	330	09/18/03 19:04	KES	78-59-1		
2-Nitrophenol	ND	ug/kg	330	09/18/03 19:04	KES	88-75-5		
2,4-Dimethylphenol	ND	ug/kg	330	09/18/03 19:04	KES	105-67-9		
Benzoic acid	ND	ug/kg	1600	09/18/03 19:04	KES	65-85-0		
bis(2-Chloroethoxy)methane	ND	ug/kg	330	09/18/03 19:04	KES	111-91-1		
2,4-Dichlorophenol	ND	ug/kg	330	09/18/03 19:04	KES	120-83-2		
1,2,4-Trichlorobenzene	ND	ug/kg	330	09/18/03 19:04	KES	120-82-1		
Naphthalene	ND	ug/kg	330	09/18/03 19:04	KES	91-20-3		
4-Chloroaniline	ND	ug/kg	660	09/18/03 19:04	KES	106-47-8		
Hexachloro-1,3-butadiene	ND	ug/kg	330	09/18/03 19:04	KES	87-68-3		
-Chloro-3-methylphenol	ND	ug/kg	660	09/18/03 19:04	KES	59-50-7		
2-Methylnaphthalene	ND	ug/kg	330	09/18/03 19:04	KES	91-57-6		
Hexachlorocyclopentadiene	ND	ug/kg	330	09/18/03 19:04	KES	77-47-4		
2,4,6-Trichlorophenol	ND	ug/kg	330	09/18/03 19:04	KES	88-06-2		
2,4,5-Trichlorophenol	ND	ug/kg	330	09/18/03 19:04	KES	95-95-4		
2-Chloronaphthalene	ND	ug/kg	330	09/18/03 19:04	KES	91-58-7		
2-Nitroaniline	ND	ug/kg	1600	09/18/03 19:04	KES	88-74-4		
Dimethylphthalate	ND	ug/kg	330	09/18/03 19:04	KES	131-11-3		
Acenaphthylene	ND	ug/kg	330	09/18/03 19:04	KES	208-96-8		
2,6-Dinitrotoluene	ND	ug/kg	330	09/18/03 19:04	KES	606-20-2		
3-Nitroaniline	ND	ug/kg	1600	09/18/03 19:04	KES	99-09-2		
Acenaphthene	ND	ug/kg	330	09/18/03 19:04	KES	83-32-9		
2,4-Dinitrophenol	ND	ug/kg	1600	09/18/03 19:04	KES	51-28-5		
4-Nitrophenol	ND	ug/kg	1600	09/18/03 19:04	KES	100-02-7		
Dibenzofuran	ND	ug/kg	330	09/18/03 19:04	KES	132-64-9		
2,4-Dinitrotoluene	ND	ug/kg	330	09/18/03 19:04	KES	121-14-2		
Diethylphthalate	ND	ug/kg	330	09/18/03 19:04	KES	84-66-2		
4-Chlorophenylphenyl ether	ND	ug/kg	330	09/18/03 19:04	KES	7005-72-3		
Fluorene	ND	ug/kg	330	09/18/03 19:04	KES	86-73-7		
4-Nitroaniline	ND	ug/kg	1600	09/18/03 19:04	KES	100-01-6		
4,6-Dinitro-2-methylphenol	ND	ug/kg	1600	09/18/03 19:04	KES	534-52-1		
N-Nitrosodiphenylamine	ND	ug/kg	330	09/18/03 19:04	KES	86-30-6		

REPORT OF LABORATORY ANALYSIS

Pace Analytical™
www.pacelabs.com

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5030169
Client Project ID: C818 Stanley Tools

Lab Sample No: 502775901 | Project Sample Number: 5030169-001 | Date Collected: 09/16/03 08:35
Client Sample ID: TS001 | Matrix: Soil | Date Received: 09/17/03 09:41

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
4-Bromophenylphenyl ether	ND	ug/kg	330	09/18/03 19:04	KES	101-55-3		
Hexachlorobenzene	ND	ug/kg	330	09/18/03 19:04	KES	118-74-1		
Pentachlorophenol	ND	ug/kg	1600	09/18/03 19:04	KES	87-86-5		
Phenanthrene	ND	ug/kg	330	09/18/03 19:04	KES	85-01-8		
Anthracene	ND	ug/kg	330	09/18/03 19:04	KES	120-12-7		
Di-n-butylphthalate	ND	ug/kg	330	09/18/03 19:04	KES	84-74-2		
Fluoranthene	ND	ug/kg	330	09/18/03 19:04	KES	206-44-0		
Pyrene	ND	ug/kg	330	09/18/03 19:04	KES	129-00-0		
Butylbenzylphthalate	ND	ug/kg	330	09/18/03 19:04	KES	85-68-7		
3,3'-Dichlorobenzidine	ND	ug/kg	660	09/18/03 19:04	KES	91-94-1		
Benzo(a)anthracene	ND	ug/kg	330	09/18/03 19:04	KES	56-55-3		
Chrysene	ND	ug/kg	330	09/18/03 19:04	KES	218-01-9		
bis(2-Ethylhexyl)phthalate	ND	ug/kg	330	09/18/03 19:04	KES	117-81-7		
Di-n-octylphthalate	ND	ug/kg	330	09/18/03 19:04	KES	117-84-0		
Benzo(b)fluoranthene	ND	ug/kg	330	09/18/03 19:04	KES	205-99-2		
Benzo(k)fluoranthene	ND	ug/kg	330	09/18/03 19:04	KES	207-08-9		
Benzo(a)pyrene	ND	ug/kg	330	09/18/03 19:04	KES	50-32-8		
ndeno(1,2,3-cd)pyrene	ND	ug/kg	330	09/18/03 19:04	KES	193-39-5		
Dibenz(a,h)anthracene	ND	ug/kg	330	09/18/03 19:04	KES	53-70-3		
Benzo(g,h,i)perylene	ND	ug/kg	330	09/18/03 19:04	KES	191-24-2		
Aniline	ND	ug/kg	330	09/18/03 19:04	KES	62-53-3		
Nitrobenzene-d5 (S)	78	%		09/18/03 19:04	KES	4165-60-0		
2-Fluorobiphenyl (S)	80	%		09/18/03 19:04	KES	321-60-8		
Terphenyl-d14 (S)	64	%		09/18/03 19:04	KES	1718-51-0		
Phenol-d6 (S)	85	%		09/18/03 19:04	KES	13127-88-3		
2-Fluorophenol (S)	84	%		09/18/03 19:04	KES	367-12-4		
2,4,6-Tribromophenol (S)	78	%		09/18/03 19:04	KES			
Date Extracted	09/17/03			09/17/03				

GC/MS Volatiles

GC/MS VOCs by 8260 — Prep/Method: EPA 5030 / EPA 8260

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Dichlorodifluoromethane	ND	ug/kg	5.0	09/18/03 06:38	HEB	75-71-8		
Chloromethane	ND	ug/kg	5.0	09/18/03 06:38	HEB	74-87-3		
Vinyl chloride	ND	ug/kg	2.0	09/18/03 06:38	HEB	75-01-4		
Bromomethane	ND	ug/kg	5.0	09/18/03 06:38	HEB	74-83-9		
Chloroethane	ND	ug/kg	5.0	09/18/03 06:38	HEB	75-00-3		
Trichlorofluoromethane	ND	ug/kg	5.0	09/18/03 06:38	HEB	75-69-4		
Methylene chloride	ND	ug/kg	20.	09/18/03 06:38	HEB	75-09-2		
1,1-Dichloroethene	ND	ug/kg	5.0	09/18/03 06:38	HEB	75-35-4		

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5030169
Client Project ID: C818 Stanley Tools

Lab Sample No: 502775901 Project Sample Number: 5030169-001 Date Collected: 09/16/03 08:35
Client Sample ID: TS001 Matrix: Soil Date Received: 09/17/03 09:41

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
trans-1,2-Dichloroethene	ND	ug/kg	5.0	09/18/03 06:38	HEB	156-60-5		
1,1-Dichloroethane	ND	ug/kg	5.0	09/18/03 06:38	HEB	75-34-3		
2,2-Dichloropropane	ND	ug/kg	5.0	09/18/03 06:38	HEB	594-20-7		
cis-1,2-Dichloroethene	ND	ug/kg	5.0	09/18/03 06:38	HEB	156-59-2		
Chloroform	ND	ug/kg	5.0	09/18/03 06:38	HEB	67-66-3		
Bromochloromethane	ND	ug/kg	5.0	09/18/03 06:38	HEB	74-97-5		
1,1,1-Trichloroethane	ND	ug/kg	5.0	09/18/03 06:38	HEB	71-55-6		
Carbon tetrachloride	ND	ug/kg	5.0	09/18/03 06:38	HEB	56-23-5		
1,1-Dichloropropene	ND	ug/kg	5.0	09/18/03 06:38	HEB	563-58-6		
Benzene	ND	ug/kg	5.0	09/18/03 06:38	HEB	71-43-2		
1,2-Dichloroethane	ND	ug/kg	5.0	09/18/03 06:38	HEB	107-06-2		
Trichloroethene	ND	ug/kg	5.0	09/18/03 06:38	HEB	79-01-6		
1,2-Dichloropropane	ND	ug/kg	5.0	09/18/03 06:38	HEB	78-87-5		
Bromodichloromethane	ND	ug/kg	5.0	09/18/03 06:38	HEB	75-27-4		
Dibromomethane	ND	ug/kg	5.0	09/18/03 06:38	HEB	74-95-3		
Toluene	ND	ug/kg	5.0	09/18/03 06:38	HEB	108-88-3		
1,1,2-Trichloroethane	ND	ug/kg	5.0	09/18/03 06:38	HEB	79-00-5		
etrachloroethene	ND	ug/kg	5.0	09/18/03 06:38	HEB	127-18-4		
1,3-Dichloropropane	ND	ug/kg	5.0	09/18/03 06:38	HEB	142-28-9		
Dibromochloromethane	ND	ug/kg	5.0	09/18/03 06:38	HEB	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/kg	5.0	09/18/03 06:38	HEB	106-93-4		
Chlorobenzene	ND	ug/kg	5.0	09/18/03 06:38	HEB	108-90-7		
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.0	09/18/03 06:38	HEB	630-20-6		
Ethylbenzene	ND	ug/kg	5.0	09/18/03 06:38	HEB	100-41-4		
m&p-Xylene	ND	ug/kg	5.0	09/18/03 06:38	HEB			
o-Xylene	ND	ug/kg	5.0	09/18/03 06:38	HEB	95-47-6		
Styrene	ND	ug/kg	5.0	09/18/03 06:38	HEB	100-42-5		
Bromoform	ND	ug/kg	5.0	09/18/03 06:38	HEB	75-25-2		
Isopropylbenzene (Cumene)	ND	ug/kg	5.0	09/18/03 06:38	HEB	98-82-8		
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0	09/18/03 06:38	HEB	79-34-5		
Bromobenzene	ND	ug/kg	5.0	09/18/03 06:38	HEB	108-86-1		
1,2,3-Trichloropropane	ND	ug/kg	5.0	09/18/03 06:38	HEB	96-18-4		
n-Propylbenzene	ND	ug/kg	5.0	09/18/03 06:38	HEB	103-65-1		
2-Chlorotoluene	ND	ug/kg	5.0	09/18/03 06:38	HEB	95-49-8		
1,3,5-Trimethylbenzene	ND	ug/kg	5.0	09/18/03 06:38	HEB	108-67-8		
4-Chlorotoluene	ND	ug/kg	5.0	09/18/03 06:38	HEB	106-43-4		
1,2,4-Trimethylbenzene	ND	ug/kg	5.0	09/18/03 06:38	HEB	95-63-6		
sec-Butylbenzene	ND	ug/kg	5.0	09/18/03 06:38	HEB	135-98-8		
tert-Butylbenzene	ND	ug/kg	5.0	09/18/03 06:38	HEB	98-06-6		

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5030169
Client Project ID: C818 Stanley Tools

Lab Sample No: 502775901
Project Sample Number: 5030169-001
Date Collected: 09/16/03 08:35
Client Sample ID: TS001
Matrix: Soil
Date Received: 09/17/03 09:41

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
p-Isopropyltoluene	ND	ug/kg	5.0	09/18/03 06:38	HEB	99-87-6		
1,3-Dichlorobenzene	ND	ug/kg	5.0	09/18/03 06:38	HEB	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	5.0	09/18/03 06:38	HEB	106-46-7		
n-Butylbenzene	ND	ug/kg	5.0	09/18/03 06:38	HEB	104-51-8		
1,2-Dichlorobenzene	ND	ug/kg	5.0	09/18/03 06:38	HEB	95-50-1		
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.0	09/18/03 06:38	HEB	96-12-8		
1,2,4-Trichlorobenzene	ND	ug/kg	5.0	09/18/03 06:38	HEB	120-82-1		
Hexachloro-1,3-butadiene	ND	ug/kg	5.0	09/18/03 06:38	HEB	87-68-3		
Naphthalene	ND	ug/kg	5.0	09/18/03 06:38	HEB	91-20-3		
1,2,3-Trichlorobenzene	ND	ug/kg	5.0	09/18/03 06:38	HEB	87-61-6		
trans-1,3-Dichloropropene	ND	ug/kg	5.0	09/18/03 06:38	HEB	10061-02-6		
cis-1,3-Dichloropropene	ND	ug/kg	5.0	09/18/03 06:38	HEB	10061-01-5		
2-Chloroethylvinyl ether	ND	ug/kg	50.	09/18/03 06:38	HEB	110-75-8		
Acetone	ND	ug/kg	100	09/18/03 06:38	HEB	67-64-1		
2-Butanone (MEK)	ND	ug/kg	10.	09/18/03 06:38	HEB	78-93-3		
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	10.	09/18/03 06:38	HEB	108-10-1		
Carbon disulfide	ND	ug/kg	10.	09/18/03 06:38	HEB	75-15-0		
crolein	ND	ug/kg	100	09/18/03 06:38	HEB	107-02-8		
.crylonitrile	ND	ug/kg	100	09/18/03 06:38	HEB	107-13-1		
2-Hexanone	ND	ug/kg	100	09/18/03 06:38	HEB	591-78-6		
Vinyl acetate	ND	ug/kg	100	09/18/03 06:38	HEB	108-05-4		
Iodomethane	ND	ug/kg	100	09/18/03 06:38	HEB	74-88-4		
Methyl-tert-butyl ether	ND	ug/kg	5.0	09/18/03 06:38	HEB	1634-04-4		
Ethyl methacrylate	ND	ug/kg	100	09/18/03 06:38	HEB	97-63-2		
trans-1,4-Dichloro-2-butene	ND	ug/kg	100	09/18/03 06:38	HEB	110-57-6		
Dibromofluoromethane (S)	95	%		09/18/03 06:38	HEB	1868-53-7		
Toluene-d8 (S)	106	%		09/18/03 06:38	HEB	2037-26-5		
4-Bromofluorobenzene (S)	92	%		09/18/03 06:38	HEB	460-00-4		

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7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5030169
Client Project ID: C818 Stanley Tools

Lab Sample No: 502843238 Project Sample Number: 5030169-002 Date Collected: 09/16/03 08:35
Client Sample ID: TS001 SPLP Matrix: Water Date Received: 09/17/03 09:41

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Selenium, AAS Furnace	Prep/Method: EPA 3020 / EPA 7740							
Selenium	0.378	J ug/l	2.00	10/08/03 19:26	DDM	7782-49-2	1	
Date Digested	10/08/03			10/08/03				

Comments : SPLP 1312 for Selenium.

^2

P R E L I M I N A R Y — P R E L I M I N A R Y

{ANALYTICAL REPORT}
{USEPA CLP FORM 1}

Earth Tech - Livonia Office
Proj: Former Stanley Tools
Facility, Fowlerville
Subm: October 6, 2003 Soil

Submittal Number: 36257- 79
Location:
Contact: Gary L. Wood
Phone: (616) 975-4500

CAS No.		TS001	Data Qualifiers C	Q	M	Units
	Lab Sample No:	345417				
	Percent Solids	91		G		%
7440-44-0	Carbon, Total Organic	0.91				%

Sampled by:	C.K./R.R.
Date Sampled:	10/06/03
Time Sampled:	14:00
Date Received:	10/06/03
Time Received:	16:05

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Pace Analytical Services, Inc.
9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9250945
Client Project ID: Entact/5030169

Solid results are reported on a wet weight basis

Lab Sample No: 502775901 — Project Sample Number: 9250945-001 — Date Collected: 09/16/03 08:35
Client Sample ID: TS001 — Matrix: Soil — Date Received: 09/17/03 09:41

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
GC Semivolatiles									
Organochlorine PCBs	Prep/Method: EPA 3550 / EPA 8082								
PCB-1016 (Aroclor 1016)	ND	ug/kg	330	10.0	09/20/03	CBE	12674-11-2		
PCB-1221 (Aroclor 1221)	ND	ug/kg	330	10.0	09/20/03	CBE	11104-28-2		
PCB-1232 (Aroclor 1232)	ND	ug/kg	330	10.0	09/20/03	CBE	11141-16-5		
PCB-1242 (Aroclor 1242)	ND	ug/kg	330	10.0	09/20/03	CBE	53469-21-9		
PCB-1248 (Aroclor 1248)	ND	ug/kg	330	10.0	09/20/03	CBE	12672-29-6		
PCB-1254 (Aroclor 1254)	ND	ug/kg	330	10.0	09/20/03	CBE	11097-69-1		
PCB-1260 (Aroclor 1260)	ND	ug/kg	330	10.0	09/20/03	CBE	11096-82-5		
Decachlorobiphenyl (S)	0	%		1.0	09/20/03	CBE	2051-24-3	1,2	
Date Extracted	09/19/03				09/19/03				

CHAIN OF CUSTODY

ENTACT

1360 N. Wood Dale Rd. Suite A
Wood Dale, Illinois 60191
Ph. 630/616-2100 Fax 630/616-9203

Sampler: B. MORGAN Job #: C818

ENTACT Contact: R. REGESTER Date: 6·3·03

Turnaround Time Requested

24 Hour ☐ 48 Hour ☒ 3 Day ☐ Normal ☐ Other ☒ 4 DAY

Sample No.	Matrix	Composite or Grab	Description/Remarks	Preservative	Analysis
BF · 001	SOIL	GRAB	1620 BACKFILL SOURCE	ICE	ABCD

Samples Relinquished By: Rhonda Regester 6·3·03 Date

Samples Received By: ____ Date

Samples Relinquished By: ____ Date

Samples Received By: ____ Date

Samples Relinquished By: ____ Date

ANALYSIS

A= MICH 11 METALS Total F=

B= VOC - Total G=

C= PCBs - H=

D= SVOC - Total I=

E= J=

Condition of Sample Upon Receipt:

Bottles Intact? Yes / No	Volatiles Free of Headspace? Yes / No	COC Seals Present and Intact? Yes / No

Distribution:
Original - To Customer w/ Final Report
2nd Copy - To Job File
3rd Copy - To Lab

CHAIN OF STODY

ENTACT
1360 N. Wood Dale Rd. Suite A
Wood Dale, Illinois 60191
Ph. 630/616-2100 Fax 630/616-9203

Sampler: R. REGESTER/D. DUNCAN Job #: C818

ENTACT Contact: R. REGESTER Date: 6.12.03

Turnaround Time Requested
24 Hour ☐ 48 Hour ☐ 3 Day ☐ Normal ☐ Other ☐ ____

Sample No.	Matrix	Composite or Grab	Description/Remarks	Preservative	Analysis
TCE.007	SOIL	GRAB	6.12.03 0930 TCE AREA 2	ICE	A
TCE.008	↓	↓	↓ 0936 ↓	↓	↓
TCE.009	↓	↓	↓ 0940 ↓	↓	↓
TCE.010	↓	↓	↓ 0944 ↓	↓	↓
TCE.011	↓	↓	↓ 1015 ↓	↓	↓
TCE.012	↓	↓	↓ 1020 ↓	↓	↓
BF.002	SOIL	GRAB	6.12.03 1000 BACKFILL	ICE	RR ~~A~~BCDE

Samples Relinquished By: Rhonda Regester 6.12.03 Date

Samples Received By: ____ Date

Samples Relinquished By: ____ Date

Samples Received By: ____ Date

Samples Relinquished By: ____ Date

ANALYSIS

A= Total TCE F=
B= MICH 11 METALS Total G=
C= PCB's H=
D= SVOC - Total I=
E= VOC - Total J=

Condition of Sample Upon Receipt:

Bottles Intact? Yes / No	Volatiles Free of Headspace? Yes / No	COC Seals Present and Intact? Yes / No

Distribution:
Original - To Customer w/ Final Report
2nd Copy - To Job File
3rd Copy - To Lab

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CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 1 of 1

Required Client Information: Section A

Company	Enfoot
Address	125 N. Funk St
	Coulesville MI 48836
Phone: 517 223-2233	Fax: 517 223-7636

Required Client Information: Section B

Report To:	Traci Lessler
Copy To:	Enfoot - Coulesville
Invoice To:	Same
P.O.	
Project Name:	Stanley Tool
Project Number:	2-518

Client Information (Check quote/contract):

Requested Due Date:	*TAT: 5 day

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.

Turn Around Time (TAT) in calendar days.

To Be Completed by Pace Analytical and Client — Section C

Quote Reference:	
Project Manager:	
Project #:	
Profile #:	

Section D — Required Client Information:

SAMPLE ID

One character per box.
(A–Z, 0–9 / .–)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes MATRIX	CODE
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

Preservatives

Requested Analysis: MI 11 Metals Total; VOC - Total; PCBS; SVOC - Total

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED mm / dd / yy	TIME COLLECTED hh:mm a/p	# Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other Ice	MI 11 Metals Total	VOC - Total	PCBS	SVOC - Total							Remarks / Lab ID
1	BF-003	SL	8-26-03	1247	1								1	1	1	1	1							
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS
Federal Express	841756814428	08 26 03	1

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	Kurt Sutliff	8.26.03	1000			

SAMPLE CONDITION

Temp in °C	
Received on Ice	Y/N
Sealed Cooler	Y/N
Samples Intact	Y/N

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kurt Sutliff

SIGNATURE of SAMPLER: Kurt Sutliff

DATE Signed: (MM / DD / YY) 8-26-03

SEE REVERSE SIDE FOR INSTRUCTIONS

Form COC01 Rev 0402

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[CHAIN-OF-CUSTODY / Analytical Request Document]

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Page: 1 of 1

Section A — Required Client Information

Company: EMTACT
Address: 4/25 W. Frank St
Jacksonville MI 48836
Phone: 517-223-7633 Fax: 517-223-7636

Section B — Required Client Information

Report To: Rhonda Regester
Copy To:
Invoice To:
P.O.
Project Name: Stanley Tool
Project Number: C318

Client Information (Check quote/contract):
Requested Due Date: *TAT: Normal

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.
Turn Around Time (TAT) in calendar days.

Section C — To Be Completed by Pace Analytical and Client

Quote Reference:
Project Manager:
Project #:
Profile #:
Requested Analysis: MI-11 Metals Total, VOC Total, SVOC Total, PCBs

Section D — Required Client Information

SAMPLE ID
One character per box.
(A–Z, 0–9 / .–)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes MATRIX	CODE
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED mm/dd/yy	TIME COLLECTED hh:mm a/p	# Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	MI-11 Metals Total	VOC Total	SVOC Total	PCBs	Remarks / Lab ID
1	BF003R	SL	8 27 03	1515									1	1	1	1	1	Resampled – Arrived to lab below 4°.
2	BF004	SL	8 27 03	1521									1	1	1	1	1	

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS	ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Fed-Ex	841756844417	8-27-03	1		Rhonda Regester	8 27 03	1600			

SAMPLE CONDITION

Temp in °C	
Received on Ice	Y/N
Sealed Cooler	Y/N
Samples Intact	Y/N

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Rhonda Regester
SIGNATURE of SAMPLER: Rhonda Regester
DATE Signed: (MM / DD / YY) 8 27 03

SEE REVERSE SIDE FOR INSTRUCTIONS

Form COC01 Rev 0402

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[illegible] AI[illegible] OF-[illegible] ST[illegible] DY [illegible] na[illegible] ica[illegible] eq[illegible] st [illegible]

The Chain-[illegible] ody is a LEGAL DOCUMENT. All relevant fields must be completed accurate'

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Page: 1 of 1

Section A Required Client Information:

Company	ENTACT
Address	425 W. Frank St Fowlerville MI 48836
Phone	517223-7633
Fax	517223-7636

Section B Required Client Information:

Report To:	R. Regester
Copy To:	
Invoice To:	
P.O.	
Project Name	Stanley Tools
Project Number:	C-818

Client Information (Check quote/contract):

Requested Due Date:	*TAT:
9.10.03 / 9.16.03	24hr / 5day

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.

Turn Around Time (TAT) in calendar days.

Section C To Be Completed by Pace Analytical and Client

Quote Reference:	
Project Manager:	D. Duncan
Project #:	C-818
Profile #:	

Section D Required Client Information:

SAMPLE ID
One character per box.
(A–Z, 0–9 / .–)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

Requested Analysis: MI-10 Metals + Ni (Total); PCBs; VOCs Total; SVOCs Total

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED mm / dd / yy	TIME COLLECTED hh:mm a/p	# Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other Ice	MI-10 Metals + Ni (Total)	PCBs	VOCs Total	SVOCs Total	Remarks / Lab ID
1	BF003R	SL	9.8.03	1335	3								✓	1	1	1	1	Metals + PCB
2	BF005	SL	9.8.03	1323	3								✓	1	1	1	1	TAT of 24hrs
3	BF006	SL	9.8.03	1015	1								✓	1	1			↓
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS
Fed EX	839674517271	9.8.03	1

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	R. Regester	9.8.03	1600			

SAMPLE CONDITION

Temp in °C	
Received on Ice	Y/N
Sealed Cooler	Y/N
Samples Intact	Y/N

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: R. Regester

SIGNATURE of SAMPLER: R. Regester

DATE Signed: (MM / DD / YY) 9.8.03

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Section A Required Client Information:

Company	ENTACT
Address	425 W. Frank St Fowlerville MI 48836
Phone	5172237633
Fax	5172237636

Section B Required Client Information:

Report To:	Rhonda Regester
Copy To:	
Invoice To:	
P.O.	
Project Name:	Stanley Tools
Project Number:	C818

Client Information (Check quote/contract):

Requested Due Date: 9.11.03 / 9.16.03 *TAT: 24hr / 5day

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.

Turn Around Time (TAT) in calendar days.

Section C To Be Completed by Pace Analytical and Client

Quote Reference:	
Project Manager:	D. Duncan
Project #:	
Profile #:	

Section D Required Client Information:

SAMPLE ID — One character per box. (A–Z, 0–9 / .-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — WATER WT, SOIL SL, OIL OL, WIPE WP, AIR AR, TISSUE TS, OTHER OT

Requested Analysis: MI 10 Metals: Ni (Total); PCB's; VOCs total; SVOCs total

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED mm/dd/yy	TIME COLLECTED hh:mm a/p	# Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other ICE	MI 10 Metals: Ni (Total)	PCB's	VOCs total	SVOCs total	Remarks / Lab ID
1	BF003R	SL	9.9.03	1330	3								✓	1	1	1	1	Metals + PCB
2	BF005	SL	9.9.03	1324	3								✓	1	1	1	1	TAT of 24hrs
3																		* Samples
4																		retaken due
5																		to arriving
6																		to lab >4°
7																		today.
8																		
9																		
10																		
11																		
12																		

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS	ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Fed-Ex	839674517260	9.9.03	1		Rhonda Regester	9.9.03				

SAMPLE CONDITION

Temp in °C	
Received on Ice	Y/N
Sealed Cooler	Y/N
Samples Intact	Y/N

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Rhonda Regester

SIGNATURE of SAMPLER: Rhonda Regester

DATE Signed: (MM / DD / YY) 9.9.03

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Section A — Required Client Information:

Company	ENTACT
Address	425 W. Frank St Fowlerville MI 48836
Phone	5172237633
Fax	5172237636

Section B — Required Client Information:

Report To:	R. Regester
Copy To:	
Invoice To:	
P.O.	
Project Name:	Stanley Tools
Project Number:	C818

Client Information (Check quote/contract):

Requested Due Date:	*TAT:
9.19.03	3 day

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.

Turn Around Time (TAT) in calendar days.

Section C — To Be Completed by Pace Analytical and Client

Quote Reference:	
Project Manager:	
Project #:	
Profile #:	

Requested Analysis: MI 10 Metals + Ni; PCBs; VOCs total; SVOCs total; organic content %; pH

Section D — Required Client Information:

SAMPLE ID
One character per box.
(A–Z, 0–9 / .–)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED mm/dd/yy	TIME COLLECTED hh:mm a/p	# Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other Re	Remarks / Lab ID
1	TS001	SL	9.16.03	0835	3								1	
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS
Fed Ex	837674517227	9-16-03	1

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	R. Regester	9.16.03	1700			

SAMPLE CONDITION

Temp in °C	
Received on Ice	Y/N
Sealed Cooler	Y/N
Samples Intact	Y/N

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: R. Regester

SIGNATURE of SAMPLER: Rhonda Regester

DATE Signed: (MM / DD / YY) 9.16.03

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Required Client Information: **Section A**

Company	ENTACT
Address	425 W. Frank St
	Fowlerville MI 48836
Phone	5172237633
Fax	5172237636

Required Client Information: **Section B**

Report To:	Rhonda Regester
Copy To:	
Invoice To:	
P.O.	
Project Name:	Stanley Tools
Project Number:	C818

Client Information (Check quote/contract):

Requested Due Date:	*TAT:
9-26-03	24 Hr.

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.

Turn Around Time (TAT) in calendar days.

To Be Completed by Pace Analytical and Client **Section C**

Quote Reference:	
Project Manager:	
Project #:	
Profile #:	

Section D **Required** Client Information:

SAMPLE ID
One character per box.
(A-Z, 0-9 / .-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes MATRIX	CODE
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

Requested Analysis: MI-10 Metals + Ni; SVOC-Total; VOC-Total; PCB's; Cr+6; Cr-Total

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED mm/dd/yy	TIME COLLECTED hh:mm a/p	# Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other ice	MI-10 Metals + Ni	SVOC-Total	VOC-Total	PCB's	Cr+6	Cr-Total	Remarks / Lab ID
1	CL001	SL	9-24-03	1135	5								X	X	X	X	X	X	X	MI-OP Memo Detection Levels
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS	ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Fed-Ex	839674517205	9-24-03	1		Rhonda Regester	9-24-03	1500			

SAMPLE CONDITION

Temp in °C	
Received on Ice	Y/N
Sealed Cooler	Y/N
Samples Intact	Y/N

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Rhonda Regester

SIGNATURE of SAMPLER: Rhonda Regester

DATE Signed: (MM / DD / YY) 9-24-03

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Section A Required Client Information:

Company	ENTACT
Address	425 W. Frank St
	Fowlerville MI
	48836
Phone	517 223 7633
Fax	517 223 7636

Section B Required Client Information:

Report To:	R. Regester
Copy To:	
Invoice To:	
P.O.	
Project Name:	C818
Project Number:	Stanley Tools

Client Information (Check quote/contract):

Requested Due Date:	*TAT:
10·23·03	4 day

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.

Turn Around Time (TAT) in calendar days.

Section C To Be Completed by Pace Analytical and Client

Quote Reference:	
Project Manager:	
Project #:	
Profile #:	

Requested Analysis: SPLP Selenium

Section D Required Client Information:

SAMPLE ID

One character per box.
(A–Z, 0–9 / .–)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes MATRIX	CODE
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED mm / dd / yy	TIME COLLECTED hh:mm a/p	# Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	SPLP Selenium	Remarks / Lab ID
1	BF004	SL	8·27·03	1521	1	X								1	
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS
Fed-Ex	839674517T19	10·17·03	1

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
1	Rhonda Regester	10·17·03	1500			

SAMPLE CONDITION

Temp in °C	
Received on Ice	Y/N
Sealed Cooler	Y/N
Samples Intact	Y/N

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: R. Regester

SIGNATURE of SAMPLER: Rhonda Regester

DATE Signed: (MM / DD / YY) 10·17·03

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Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5027913
Client Project ID: C818

Lab Sample No: 502497944 Project Sample Number: 5027913-001 Date Collected: 06/09/03 00:00
Client Sample ID: TSP-004 Matrix: Air Date Received: 06/10/03 13:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method: / 40CFR APG							
Arsenic	ND	ug/m3	0.150	07/15/03 21:49	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/15/03 21:49	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/15/03 21:49	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/15/03 21:49	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/15/03 21:49	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/15/03 21:49	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/15/03 21:49	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/15/03 21:49	FRW	7782-49-2		
Zinc	0.254	ug/m3	0.150	07/15/03 21:49	FRW	7440-66-6		
Date Digested	07/13/03			07/13/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	17.7	ug/m3	1.00	06/13/03 11:50	LAD			

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7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5027913
Client Project ID: C818

Lab Sample No: 502497951
Client Sample ID: TSP-005
Project Sample Number: 5027913-002
Matrix: Air
Date Collected: 06/09/03 00:00
Date Received: 06/10/03 13:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/15/03 22:00	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/15/03 22:00	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/15/03 22:00	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/15/03 22:00	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/15/03 22:00	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/15/03 22:00	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/15/03 22:00	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/15/03 22:00	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/15/03 22:00	FRW	7440-66-6		
Date Digested	07/13/03			07/13/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	14.8	ug/m3	1.00	06/13/03 11:50	LAD			

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Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5027913
Client Project ID: C818

Lab Sample No: 502497977 Project Sample Number: 5027913-003 Date Collected: 06/09/03 00:00
Client Sample ID: TSP-006 Matrix: Air Date Received: 06/10/03 13:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/15/03 22:06	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/15/03 22:06	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/15/03 22:06	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/15/03 22:06	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/15/03 22:06	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/15/03 22:06	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/15/03 22:06	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/15/03 22:06	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/15/03 22:06	FRW	7440-66-6		
Date Digested	07/13/03			07/13/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	8.64	ug/m3	1.00	06/13/03 11:50	LAD			

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7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5027913
Client Project ID: C818

Lab Sample No: 502497985
Client Sample ID: TSP-007

Project Sample Number: 5027913-004
Matrix: Air

Date Collected: 06/09/03 00:00
Date Received: 06/10/03 13:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/15/03 22:12	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/15/03 22:12	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/15/03 22:12	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/15/03 22:12	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/15/03 22:12	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/15/03 22:12	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/15/03 22:12	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/15/03 22:12	FRW	7782-49-2		
Zinc	0.133	J ug/m3	0.150	07/15/03 22:12	FRW	7440-66-6	1	
Date Digested	07/13/03			07/13/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	35.1	ug/m3	1.00	06/13/03 11:50	LAD			

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7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5027913
Client Project ID: C818

Lab Sample No: 502498009 Project Sample Number: 5027913-005 Date Collected: 06/09/03 00:00
Client Sample ID: TSP-008 Matrix: Air Date Received: 06/10/03 13:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/15/03 22:17	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/15/03 22:17	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/15/03 22:17	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/15/03 22:17	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/15/03 22:17	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/15/03 22:17	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/15/03 22:17	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/15/03 22:17	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/15/03 22:17	FRW	7440-66-6		
Date Digested	07/13/03			07/13/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	49.0	ug/m3	1.00	06/13/03 11:50	LAD			

REPORT OF LABORATORY ANALYSIS

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7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5027913
Client Project ID: C818

Lab Sample No: 502498025 Project Sample Number: 5027913-006 Date Collected: 06/09/03 00:00
Client Sample ID: TSP-009 Matrix: Air Date Received: 06/10/03 13:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/15/03 22:17	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/15/03 22:17	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/15/03 22:17	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/15/03 22:17	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/15/03 22:17	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/15/03 22:17	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/15/03 22:17	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/15/03 22:17	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/15/03 22:17	FRW	7440-66-6		
Date Digested	07/13/03			07/13/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	29.1	ug/m3	1.00	06/13/03 11:50	LAD			

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Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5027913
Client Project ID: C818

Lab Sample No: 502498033 | Project Sample Number: 5027913-007 | Date Collected: 06/09/03 00:00
Client Sample ID: TSP-010 | Matrix: Air | Date Received: 06/10/03 13:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method: / 40CFR APG							
Arsenic	ND	ug/m3	0.150	07/15/03 22:29	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/15/03 22:29	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/15/03 22:29	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/15/03 22:29	FRW	7440-47-3		
Copper	0.137 J	ug/m3	0.150	07/15/03 22:29	FRW	7440-50-8	1	
Lead	ND	ug/m3	0.150	07/15/03 22:29	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/15/03 22:29	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/15/03 22:29	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/15/03 22:29	FRW	7440-66-6		
Date Digested	07/13/03			07/13/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	53.9	ug/m3	1.00	06/13/03 11:50	LAD			

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Fax: 317.872.6189

Lab Project Number: 5027971
Client Project ID: C818

Lab Sample No: 502504087 Project Sample Number: 5027971-001 Date Collected: 06/09/03 00:00
Client Sample ID: TSP-011 Matrix: Air Date Received: 06/12/03 08:42

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/15/03 22:46	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/15/03 22:46	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/15/03 22:46	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/15/03 22:46	FRW	7440-47-3		
Copper	0.312	ug/m3	0.150	07/15/03 22:46	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/15/03 22:46	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/15/03 22:46	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/15/03 22:46	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/15/03 22:46	FRW	7440-66-6		
Date Digested	07/13/03			07/13/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	46.8	ug/m3	1.00	06/13/03 11:50	LAD			

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Lab Project Number: 5027971
Client Project ID: C818

Lab Sample No: 502504103
Client Sample ID: TSP-012

Project Sample Number: 5027971-002
Matrix: Air

Date Collected: 06/09/03 00:00
Date Received: 06/12/03 08:42

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/15/03 22:52	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/15/03 22:52	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/15/03 22:52	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/15/03 22:52	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/15/03 22:52	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/15/03 22:52	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/15/03 22:52	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/15/03 22:52	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/15/03 22:52	FRW	7440-66-6		
Date Digested	07/13/03			07/13/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	23.7	ug/m3	1.00	06/13/03 11:50	LAD			

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Lab Project Number: 5027971
Client Project ID: C818

Lab Sample No: 502504152 Project Sample Number: 5027971-003 Date Collected: 06/09/03 00:00
Client Sample ID: TSP-013 Matrix: Air Date Received: 06/12/03 08:42

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/15/03 22:57	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/15/03 22:57	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/15/03 22:57	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/15/03 22:57	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/15/03 22:57	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/15/03 22:57	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/15/03 22:57	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/15/03 22:57	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/15/03 22:57	FRW	7440-66-6		
Date Digested	07/13/03			07/13/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	34.8	ug/m3	1.00	06/13/03 11:50	LAD			

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Lab Project Number: 5027971
Client Project ID: C818

Lab Sample No: 502504202
Client Sample ID: TSP-014
Project Sample Number: 5027971-004
Matrix: Air
Date Collected: 06/10/03 00:00
Date Received: 06/12/03 08:42

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/15/03 23:03	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/15/03 23:03	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/15/03 23:03	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/15/03 23:03	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/15/03 23:03	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/15/03 23:03	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/15/03 23:03	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/15/03 23:03	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/15/03 23:03	FRW	7440-66-6		
Date Digested	07/13/03			07/13/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	30.9	ug/m3	1.00	06/13/03 11:50	LAD			

Date: 07/16/03

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Lab Project Number: 5027971
Client Project ID: C818

Lab Sample No: 502504236 Project Sample Number: 5027971-005 Date Collected: 06/10/03 00:00
Client Sample ID: TSP-015 Matrix: Air Date Received: 06/12/03 08:42

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/15/03 23:09	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/15/03 23:09	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/15/03 23:09	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/15/03 23:09	FRW	7440-47-3		
Copper	0.642	ug/m3	0.150	07/15/03 23:09	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/15/03 23:09	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/15/03 23:09	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/15/03 23:09	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/15/03 23:09	FRW	7440-66-6		
Date Digested	07/13/03			07/13/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	15.1	ug/m3	1.00	06/13/03 11:50	LAD			

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Lab Project Number: 5027971
Client Project ID: C818

Lab Sample No: 502504277
Client Sample ID: TSP-016

Project Sample Number: 5027971-006
Matrix: Air

Date Collected: 06/10/03 00:00
Date Received: 06/12/03 08:42

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/15/03 23:14	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/15/03 23:14	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/15/03 23:14	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/15/03 23:14	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/15/03 23:14	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/15/03 23:14	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/15/03 23:14	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/15/03 23:14	FRW	7782-49-2		
Zinc	0.150	ug/m3	0.150	07/15/03 23:14	FRW	7440-66-6		
Date Digested	07/13/03			07/13/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	31.8	ug/m3	1.00	06/13/03 11:50	LAD			

Date: 07/16/03

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Lab Project Number: 5028592
Client Project ID: C818

Lab Sample No: 502580731 Project Sample Number: 5028592-001 Date Collected: 06/11/03 00:00
Client Sample ID: TSP-017 Matrix: Air Date Received: 07/09/03 12:20

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/14/03 19:15	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/14/03 19:15	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/14/03 19:15	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/14/03 19:15	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/14/03 19:15	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/14/03 19:15	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/14/03 19:15	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/14/03 19:15	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/14/03 19:15	FRW	7440-66-6		
Date Digested	07/13/03			07/13/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	14.5	ug/m3	1.00	07/13/03 19:00	DMT			

Lab Sample No: 502580749 Project Sample Number: 5028592-002 Date Collected: 06/11/03 00:00
Client Sample ID: TSP-018 Matrix: Air Date Received: 07/09/03 12:20

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/14/03 19:26	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/14/03 19:26	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/14/03 19:26	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/14/03 19:26	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/14/03 19:26	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/14/03 19:26	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/14/03 19:26	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/14/03 19:26	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/14/03 19:26	FRW	7440-66-6		
Date Digested	07/13/03			07/13/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	28.8	ug/m3	1.00	07/13/03 19:00	DMT			

Date: 07/15/03

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Lab Project Number: 5028592
Client Project ID: C818

Lab Sample No: 502580756 | Project Sample Number: 5028592-003 | Date Collected: 06/16/03 00:00
Client Sample ID: TSP-019 | Matrix: Air | Date Received: 07/09/03 12:20

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/14/03 19:32	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/14/03 19:32	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/14/03 19:32	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/14/03 19:32	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/14/03 19:32	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/14/03 19:32	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/14/03 19:32	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/14/03 19:32	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/14/03 19:32	FRW	7440-66-6		
Date Digested	07/13/03			07/13/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	69.5	ug/m3	1.00	07/13/03 19:00	DMT			

Lab Sample No: 502580764 | Project Sample Number: 5028592-004 | Date Collected: 06/16/03 00:00
Client Sample ID: TSP-020 | Matrix: Air | Date Received: 07/09/03 12:20

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/14/03 19:38	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/14/03 19:38	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/14/03 19:38	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/14/03 19:38	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/14/03 19:38	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/14/03 19:38	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/14/03 19:38	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/14/03 19:38	FRW	7782-49-2		
Zinc	0.297	ug/m3	0.150	07/14/03 19:38	FRW	7440-66-6		
Date Digested	07/13/03			07/13/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	146.	ug/m3	1.00	07/13/03 19:00	DMT			

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Lab Project Number: 5028592
Client Project ID: C818

Lab Sample No: 502580772 | Project Sample Number: 5028592-005 | Date Collected: 06/18/03 00:00
Client Sample ID: TSP-021 | Matrix: Air | Date Received: 07/09/03 12:20

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method: / 40CFR APG							
Arsenic	ND	ug/m3	0.150	07/14/03 19:56	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/14/03 19:56	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/14/03 19:56	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/14/03 19:56	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/14/03 19:56	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/14/03 19:56	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/14/03 19:56	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/14/03 19:56	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/14/03 19:56	FRW	7440-66-6		
Date Digested	07/13/03			07/13/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	67.0	ug/m3	1.00	07/13/03 19:00	DMT			

Lab Sample No: 502580780 | Project Sample Number: 5028592-006 | Date Collected: 06/18/03 00:00
Client Sample ID: TSP-022 | Matrix: Air | Date Received: 07/09/03 12:20

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method: / 40CFR APG							
Arsenic	ND	ug/m3	0.150	07/14/03 20:01	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/14/03 20:01	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/14/03 20:01	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/14/03 20:01	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/14/03 20:01	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/14/03 20:01	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/14/03 20:01	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/14/03 20:01	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/14/03 20:01	FRW	7440-66-6		
Date Digested	07/13/03			07/13/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	44.2	ug/m3	1.00	07/13/03 19:00	DMT			

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Lab Project Number: 5028592
Client Project ID: C818

Lab Sample No: 502580798   Project Sample Number: 5028592-007   Date Collected: 06/24/03 00:00
Client Sample ID: TSP-023   Matrix: Air   Date Received: 07/09/03 12:20

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/14/03 20:07	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/14/03 20:07	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/14/03 20:07	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/14/03 20:07	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/14/03 20:07	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/14/03 20:07	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/14/03 20:07	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/14/03 20:07	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/14/03 20:07	FRW	7440-66-6		
Date Digested	07/13/03			07/13/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	130.	ug/m3	1.00	07/13/03 19:00	DMT			

Lab Sample No: 502580806   Project Sample Number: 5028592-008   Date Collected: 06/24/03 00:00
Client Sample ID: TSP-024   Matrix: Air   Date Received: 07/09/03 12:20

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/14/03 20:13	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/14/03 20:13	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/14/03 20:13	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/14/03 20:13	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/14/03 20:13	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/14/03 20:13	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/14/03 20:13	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/14/03 20:13	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/14/03 20:13	FRW	7440-66-6		
Date Digested	07/13/03			07/13/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	46.3	ug/m3	1.00	07/13/03 19:00	DMT			

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Lab Project Number: 5028592
Client Project ID: C818

Lab Sample No: 502580814 | Project Sample Number: 5028592-009 | Date Collected: 06/24/03 00:00
Client Sample ID: TSP-025 | Matrix: Air | Date Received: 07/09/03 12:20

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/14/03 20:18	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/14/03 20:18	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/14/03 20:18	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/14/03 20:18	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/14/03 20:18	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/14/03 20:18	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/14/03 20:18	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/14/03 20:18	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/14/03 20:18	FRW	7440-66-6		
Date Digested	07/13/03			07/13/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	70.3	ug/m3	1.00	07/13/03 19:00	DMT			

Lab Sample No: 502580822 | Project Sample Number: 5028592-010 | Date Collected: 06/25/03 00:00
Client Sample ID: TSP-026 | Matrix: Air | Date Received: 07/09/03 12:20

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/14/03 20:24	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/14/03 20:24	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/14/03 20:24	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/14/03 20:24	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/14/03 20:24	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/14/03 20:24	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/14/03 20:24	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/14/03 20:24	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/14/03 20:24	FRW	7440-66-6		
Date Digested	07/13/03			07/13/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	42.4	ug/m3	1.00	07/13/03 19:00	DMT			

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Lab Project Number: 5028592
Client Project ID: C818

Lab Sample No: 502580863 | Project Sample Number: 5028592-011 | Date Collected: 06/25/03 00:00
Client Sample ID: TSP-027 | Matrix: Air | Date Received: 07/09/03 12:20

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/14/03 20:30	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/14/03 20:30	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/14/03 20:30	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/14/03 20:30	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/14/03 20:30	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/14/03 20:30	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/14/03 20:30	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/14/03 20:30	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/14/03 20:30	FRW	7440-66-6		
Date Digested	07/13/03			07/13/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	63.0	ug/m3	1.00	07/13/03 19:00	DMT			

Lab Sample No: 502580871 | Project Sample Number: 5028592-012 | Date Collected: 06/25/03 00:00
Client Sample ID: TSP-028 | Matrix: Air | Date Received: 07/09/03 12:20

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/14/03 20:35	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/14/03 20:35	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/14/03 20:35	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/14/03 20:35	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/14/03 20:35	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/14/03 20:35	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/14/03 20:35	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/14/03 20:35	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/14/03 20:35	FRW	7440-66-6		
Date Digested	07/13/03			07/13/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	96.2	ug/m3	1.00	07/13/03 19:00	DMT			

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Lab Project Number: 5028972
Client Project ID: C818

Lab Sample No: 502624976 Project Sample Number: 5028972-001 Date Collected: 07/01/03 00:00
Client Sample ID: TSP-029 Matrix: Air Date Received: 07/25/03 10:54

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/30/03 09:59	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/30/03 09:59	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/30/03 09:59	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/30/03 09:59	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/30/03 09:59	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/30/03 09:59	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/30/03 09:59	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/30/03 09:59	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/30/03 09:59	FRW	7440-66-6		
Date Digested	07/28/03			07/28/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	43.6	ug/m3	1.00	07/27/03 21:00	DMT			

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Lab Project Number: 5028972
Client Project ID: C818

Lab Sample No: 502625007 Project Sample Number: 5028972-002 Date Collected: 07/01/03 00:00
Client Sample ID: TSP-030 Matrix: Air Date Received: 07/25/03 10:54

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/30/03 10:10	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/30/03 10:10	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/30/03 10:10	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/30/03 10:10	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/30/03 10:10	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/30/03 10:10	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/30/03 10:10	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/30/03 10:10	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/30/03 10:10	FRW	7440-66-6		
Date Digested	07/28/03			07/28/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	58.4	ug/m3	1.00	07/27/03 21:00	DMT			

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Lab Project Number: 5028972
Client Project ID: C818

Lab Sample No: 502625031 | Project Sample Number: 5028972-003 | Date Collected: 07/01/03 00:00
Client Sample ID: TSP-031 | Matrix: Air | Date Received: 07/25/03 10:54

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/30/03 10:16	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/30/03 10:16	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/30/03 10:16	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/30/03 10:16	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/30/03 10:16	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/30/03 10:16	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/30/03 10:16	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/30/03 10:16	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/30/03 10:16	FRW	7440-66-6		
Date Digested	07/28/03			07/28/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	66.6	ug/m3	1.00	07/27/03 21:00	DMT			

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Lab Project Number: 5028972
Client Project ID: C818

Lab Sample No: 502625056 Project Sample Number: 5028972-004 Date Collected: 07/08/03 00:00
Client Sample ID: TSP-032 Matrix: Air Date Received: 07/25/03 10:54

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/30/03 10:21	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/30/03 10:21	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/30/03 10:21	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/30/03 10:21	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/30/03 10:21	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/30/03 10:21	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/30/03 10:21	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/30/03 10:21	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/30/03 10:21	FRW	7440-66-6		
Date Digested	07/28/03			07/28/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	23.3	ug/m3	1.00	07/27/03 21:00	DMT			

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Lab Project Number: 5028972
Client Project ID: C818

Lab Sample No: 502625072
Client Sample ID: TSP-033
Project Sample Number: 5028972-005
Matrix: Air
Date Collected: 07/08/03 00:00
Date Received: 07/25/03 10:54

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/30/03 10:27	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/30/03 10:27	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/30/03 10:27	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/30/03 10:27	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/30/03 10:27	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/30/03 10:27	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/30/03 10:27	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/30/03 10:27	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/30/03 10:27	FRW	7440-66-6		
Date Digested	07/28/03			07/28/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	22.7	ug/m3	1.00	07/27/03 21:00	DMT			

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Lab Project Number: 5028972
Client Project ID: C818

Lab Sample No: 502625080
Client Sample ID: TSP-034
Project Sample Number: 5028972-006
Matrix: Air
Date Collected: 07/08/03 00:00
Date Received: 07/25/03 10:54

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/30/03 10:33	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/30/03 10:33	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/30/03 10:33	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/30/03 10:33	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/30/03 10:33	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/30/03 10:33	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/30/03 10:33	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/30/03 10:33	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/30/03 10:33	FRW	7440-66-6		
Date Digested	07/28/03			07/28/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	12.0	ug/m3	1.00	07/27/03 21:00	DMT			

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Lab Project Number: 5028972
Client Project ID: C818

Lab Sample No: 502625106 Project Sample Number: 5028972-007 Date Collected: 07/15/03 00:00
Client Sample ID: TSP-035 Matrix: Air Date Received: 07/25/03 10:54

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/30/03 10:38	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/30/03 10:38	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/30/03 10:38	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/30/03 10:38	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/30/03 10:38	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/30/03 10:38	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/30/03 10:38	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/30/03 10:38	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/30/03 10:38	FRW	7440-66-6		
Date Digested	07/28/03			07/28/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	44.5	ug/m3	1.00	07/27/03 21:00	DMT			

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Lab Project Number: 5028972
Client Project ID: C818

Lab Sample No: 502625114 | Project Sample Number: 5028972-008 | Date Collected: 07/15/03 00:00
Client Sample ID: TSP-036 | Matrix: Air | Date Received: 07/25/03 10:54

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/30/03 10:57	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/30/03 10:57	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/30/03 10:57	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/30/03 10:57	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/30/03 10:57	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/30/03 10:57	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/30/03 10:57	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/30/03 10:57	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/30/03 10:57	FRW	7440-66-6		
Date Digested	07/28/03			07/28/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	31.1	ug/m3	1.00	07/27/03 21:00	DMT			

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Lab Project Number: 5028972
Client Project ID: C818

Lab Sample No: 502625130 Project Sample Number: 5028972-009 Date Collected: 07/15/03 00:00
Client Sample ID: TSP-037 Matrix: Air Date Received: 07/25/03 10:54

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/30/03 11:02	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/30/03 11:02	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/30/03 11:02	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/30/03 11:02	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/30/03 11:02	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/30/03 11:02	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/30/03 11:02	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/30/03 11:02	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/30/03 11:02	FRW	7440-66-6		
Date Digested	07/28/03			07/28/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	59.1	ug/m3	1.00	07/27/03 21:00	DMT			

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Lab Project Number: 5028972
Client Project ID: C818

Lab Sample No: 502625155 Project Sample Number: 5028972-010 Date Collected: 07/22/03 00:00
Client Sample ID: TSP-038 Matrix: Air Date Received: 07/25/03 10:54

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/30/03 11:08	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/30/03 11:08	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/30/03 11:08	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/30/03 11:08	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/30/03 11:08	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/30/03 11:08	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/30/03 11:08	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/30/03 11:08	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/30/03 11:08	FRW	7440-66-6		
Date Digested	07/28/03			07/28/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	62.0	ug/m3	1.00	07/27/03 21:00	DMT			

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
Phone: 317.875.5894
Fax: 317.872.6189

Lab Project Number: 5028972
Client Project ID: C818

Lab Sample No: 502625163 | Project Sample Number: 5028972-011 | Date Collected: 07/22/03 00:00
Client Sample ID: TSP-039 | Matrix: Air | Date Received: 07/25/03 10:54

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/30/03 11:14	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/30/03 11:14	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/30/03 11:14	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/30/03 11:14	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/30/03 11:14	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/30/03 11:14	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/30/03 11:14	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/30/03 11:14	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/30/03 11:14	FRW	7440-66-6		
Date Digested	07/28/03			07/28/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	57.4	ug/m3	1.00	07/27/03 21:00	DMT			

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Lab Project Number: 5028972
Client Project ID: C818

Lab Sample No: 502625189 | Project Sample Number: 5028972-012 | Date Collected: 07/22/03 00:00
Client Sample ID: TSP-040 | Matrix: Air | Date Received: 07/25/03 10:54

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	07/30/03 11:19	FRW	7440-38-2		
Barium	ND	ug/m3	0.150	07/30/03 11:19	FRW	7440-39-3		
Cadmium	ND	ug/m3	0.150	07/30/03 11:19	FRW	7440-43-9		
Chromium	ND	ug/m3	0.150	07/30/03 11:19	FRW	7440-47-3		
Copper	ND	ug/m3	0.150	07/30/03 11:19	FRW	7440-50-8		
Lead	ND	ug/m3	0.150	07/30/03 11:19	FRW	7439-92-1		
Nickel	ND	ug/m3	0.150	07/30/03 11:19	FRW	7440-02-0		
Selenium	ND	ug/m3	0.150	07/30/03 11:19	FRW	7782-49-2		
Zinc	ND	ug/m3	0.150	07/30/03 11:19	FRW	7440-66-6		
Date Digested	07/28/03			07/28/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	102.	ug/m3	1.00	07/27/03 21:00	DMT			

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Lab Project Number: 5029330
Client Project ID: C818

Lab Sample No: 502670011 | Project Sample Number: 5029330-001 | Date Collected: 08/07/03 00:00
Client Sample ID: TSP-041 | Matrix: Air | Date Received: 08/12/03 10:02

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	08/18/03 12:25	FRW	7440-38-2		
Chromium	ND	ug/m3	0.150	08/18/03 12:25	FRW	7440-47-3		
Lead	ND	ug/m3	0.150	08/18/03 12:25	FRW	7439-92-1		
Date Digested	08/15/03			08/15/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	28.1	ug/m3	1.00	08/15/03 12:00	DMT			

Lab Sample No: 502670029 | Project Sample Number: 5029330-002 | Date Collected: 08/07/03 00:00
Client Sample ID: TSP-042 | Matrix: Air | Date Received: 08/12/03 10:02

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	08/18/03 12:36	FRW	7440-38-2		
Chromium	ND	ug/m3	0.150	08/18/03 12:36	FRW	7440-47-3		
Lead	ND	ug/m3	0.150	08/18/03 12:36	FRW	7439-92-1		
Date Digested	08/15/03			08/15/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	51.6	ug/m3	1.00	08/15/03 12:00	DMT			

Lab Sample No: 502670037 | Project Sample Number: 5029330-003 | Date Collected: 08/07/03 00:00
Client Sample ID: TSP-043 | Matrix: Air | Date Received: 08/12/03 10:02

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	08/18/03 12:42	FRW	7440-38-2		
Chromium	ND	ug/m3	0.150	08/18/03 12:42	FRW	7440-47-3		
Lead	ND	ug/m3	0.150	08/18/03 12:42	FRW	7439-92-1		

REPORT OF LABORATORY ANALYSIS

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Indianapolis, IN 46268
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Fax: 317.872.6189

Lab Project Number: 5029330
Client Project ID: C818

Lab Sample No: 502670037
Client Sample ID: TSP-043

Project Sample Number: 5029330-003
Matrix: Air

Date Collected: 08/07/03 00:00
Date Received: 08/12/03 10:02

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Date Digested	08/15/03			08/15/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	128.	ug/m3	1.00	08/15/03 12:00	DMT			

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Lab Project Number: 5029960
Client Project ID: C818 Stanley Tools

Lab Sample No: 502748007 | Project Sample Number: 5029960-001 | Date Collected: 08/14/03 00:00
Client Sample ID: TSP-044 | Matrix: Air | Date Received: 09/09/03 10:33

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method: / 40CFR APG							
Arsenic	ND	ug/m3	0.150	09/12/03 17:13	FRW	7440-38-2		
Chromium	ND	ug/m3	0.150	09/12/03 17:13	FRW	7440-47-3		
Lead	ND	ug/m3	0.150	09/12/03 17:13	FRW	7439-92-1		
Date Digested	09/09/03			09/09/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	81.9	ug/m3	1.00	09/10/03 09:30	DMT			

Lab Sample No: 502748015 | Project Sample Number: 5029960-002 | Date Collected: 08/14/03 00:00
Client Sample ID: TSP-045 | Matrix: Air | Date Received: 09/09/03 10:33

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method: / 40CFR APG							
Arsenic	ND	ug/m3	0.150	09/12/03 17:24	FRW	7440-38-2		
Chromium	ND	ug/m3	0.150	09/12/03 17:24	FRW	7440-47-3		
Lead	ND	ug/m3	0.150	09/12/03 17:24	FRW	7439-92-1		
Date Digested	09/09/03			09/09/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	48.5	ug/m3	1.00	09/10/03 09:30	DMT			

Lab Sample No: 502748023 | Project Sample Number: 5029960-003 | Date Collected: 08/14/03 00:00
Client Sample ID: TSP-046 | Matrix: Air | Date Received: 09/09/03 10:33

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method: / 40CFR APG							
Arsenic	ND	ug/m3	0.150	09/12/03 17:30	FRW	7440-38-2		
Chromium	ND	ug/m3	0.150	09/12/03 17:30	FRW	7440-47-3		
Lead	ND	ug/m3	0.150	09/12/03 17:30	FRW	7439-92-1		

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Lab Project Number: 5029960
Client Project ID: C818 Stanley Tools

Lab Sample No: 502748023 | Project Sample Number: 5029960-003 | Date Collected: 08/14/03 00:00
Client Sample ID: TSP-046 | Matrix: Air | Date Received: 09/09/03 10:33

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Date Digested	09/09/03			09/09/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	66.4	ug/m3	1.00	09/10/03 09:30	DMT			

Lab Sample No: 502748031 | Project Sample Number: 5029960-004 | Date Collected: 08/21/03 00:00
Client Sample ID: TSP-047 | Matrix: Air | Date Received: 09/09/03 10:33

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method: / 40CFR APG							
Arsenic	ND	ug/m3	0.150	09/12/03 17:36	FRW	7440-38-2		
Chromium	ND	ug/m3	0.150	09/12/03 17:36	FRW	7440-47-3		
Lead	ND	ug/m3	0.150	09/12/03 17:36	FRW	7439-92-1		
Date Digested	09/09/03			09/09/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	70.6	ug/m3	1.00	09/10/03 09:30	DMT			

Lab Sample No: 502748049 | Project Sample Number: 5029960-005 | Date Collected: 08/21/03 00:00
Client Sample ID: TSP-048 | Matrix: Air | Date Received: 09/09/03 10:33

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method: / 40CFR APG							
Arsenic	ND	ug/m3	0.150	09/12/03 17:41	FRW	7440-38-2		
Chromium	ND	ug/m3	0.150	09/12/03 17:41	FRW	7440-47-3		
Lead	ND	ug/m3	0.150	09/12/03 17:41	FRW	7439-92-1		
Date Digested	09/09/03			09/09/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	52.9	ug/m3	1.00	09/10/03 09:30	DMT			

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Lab Project Number: 5029960
Client Project ID: C818 Stanley Tools

Lab Sample No: 502748056 | Project Sample Number: 5029960-006 | Date Collected: 08/21/03 00:00
Client Sample ID: TSP-049 | Matrix: Air | Date Received: 09/09/03 10:33

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	09/12/03 17:47	FRW	7440-38-2		
Chromium	ND	ug/m3	0.150	09/12/03 17:47	FRW	7440-47-3		
Lead	ND	ug/m3	0.150	09/12/03 17:47	FRW	7439-92-1		
Date Digested	09/09/03			09/09/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	63.2	ug/m3	1.00	09/10/03 09:30	DMT			

Lab Sample No: 502748064 | Project Sample Number: 5029960-007 | Date Collected: 08/27/03 00:00
Client Sample ID: TSP-050 | Matrix: Air | Date Received: 09/09/03 10:33

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	09/12/03 17:53	FRW	7440-38-2		
Chromium	ND	ug/m3	0.150	09/12/03 17:53	FRW	7440-47-3		
Lead	ND	ug/m3	0.150	09/12/03 17:53	FRW	7439-92-1		
Date Digested	09/09/03			09/09/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	121.	ug/m3	1.00	09/10/03 09:30	DMT			

Lab Sample No: 502748072 | Project Sample Number: 5029960-008 | Date Collected: 08/27/03 00:00
Client Sample ID: TSP-051 | Matrix: Air | Date Received: 09/09/03 10:33

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	09/12/03 18:11	FRW	7440-38-2		
Chromium	ND	ug/m3	0.150	09/12/03 18:11	FRW	7440-47-3		
Lead	ND	ug/m3	0.150	09/12/03 18:11	FRW	7439-92-1		

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Lab Project Number: 5029960
Client Project ID: C818 Stanley Tools

Lab Sample No: 502748072 Project Sample Number: 5029960-008 Date Collected: 08/27/03 00:00
Client Sample ID: TSP-051 Matrix: Air Date Received: 09/09/03 10:33

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Date Digested	09/09/03			09/09/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	60.3	ug/m3	1.00	09/10/03 09:30	DMT			

Lab Sample No: 502748080 Project Sample Number: 5029960-009 Date Collected: 08/27/03 00:00
Client Sample ID: TSP-052 Matrix: Air Date Received: 09/09/03 10:33

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	09/12/03 18:17	FRW	7440-38-2		
Chromium	ND	ug/m3	0.150	09/12/03 18:17	FRW	7440-47-3		
Lead	ND	ug/m3	0.150	09/12/03 18:17	FRW	7439-92-1		
Date Digested	09/09/03			09/09/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	94.0	ug/m3	1.00	09/10/03 09:30	DMT			

Lab Sample No: 502748098 Project Sample Number: 5029960-010 Date Collected: 09/03/03 00:00
Client Sample ID: TSP-053 Matrix: Air Date Received: 09/09/03 10:33

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method:	/ 40CFR APG						
Arsenic	ND	ug/m3	0.150	09/12/03 18:22	FRW	7440-38-2		
Chromium	ND	ug/m3	0.150	09/12/03 18:22	FRW	7440-47-3		
Lead	ND	ug/m3	0.150	09/12/03 18:22	FRW	7439-92-1		
Date Digested	09/09/03			09/09/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	84.0	ug/m3	1.00	09/10/03 09:30	DMT			

REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 5029960
Client Project ID: C818 Stanley Tools

Lab Sample No: 502748106
Client Sample ID: TSP-054
Project Sample Number: 5029960-011
Matrix: Air
Date Collected: 09/03/03 00:00
Date Received: 09/09/03 10:33

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method: / 40CFR APG							
Arsenic	ND	ug/m3	0.150	09/12/03 18:28	FRW	7440-38-2		
Chromium	ND	ug/m3	0.150	09/12/03 18:28	FRW	7440-47-3		
Lead	ND	ug/m3	0.150	09/12/03 18:28	FRW	7439-92-1		
Date Digested	09/09/03			09/09/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	47.0	ug/m3	1.00	09/10/03 09:30	DMT			

Lab Sample No: 502748114
Client Sample ID: TSP-055
Project Sample Number: 5029960-012
Matrix: Air
Date Collected: 09/03/03 00:00
Date Received: 09/09/03 10:33

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Metals								
Lead in Air by 40CFR	Prep/Method: / 40CFR APG							
Arsenic	ND	ug/m3	0.150	09/12/03 18:34	FRW	7440-38-2		
Chromium	ND	ug/m3	0.150	09/12/03 18:34	FRW	7440-47-3		
Lead	ND	ug/m3	0.150	09/12/03 18:34	FRW	7439-92-1		
Date Digested	09/09/03			09/09/03				
Wet Chemistry								
TSP in Air by 40CFR	Method: 40CFR APG							
Total Particles	29.4	ug/m3	1.00	09/10/03 09:30	DMT			

REPORT OF LABORATORY ANALYSIS

CHAIN C USTODY

ENTACT
1360 N. Wood Dale Rd. Suite A
Wood Dale, Illinois 60191
Ph. 630/616-2100 Fax 630/616-9203

Sampler: R. REGESTER Job #: C818

ENTACT Contact: R. REGESTER Date: 6·3·03

Turnaround Time Requested
24 Hour ☐ 48 Hour ☐ 3 Day ☒ Normal ☐ Other ☐ ________

Sample No.	Matrix	Composite or Grab	Description/Remarks	Preservative	Analysis
TSP·001	Filter	N/A	Filter #7443102 - Hoover - 1816 m^3	None	A, B
TSP·002	↓	↓	Filter #7443103 - Oreck - 1785 m^3	↓	↓
TSP·003	↓	↓	Filter #744 3104 - Eureka - 1635 m^3	↓	↓

Samples Relinquished By: Rhonda Regester 6·4·03 Date

Samples Received By: ________ Date

Samples Relinquished By: ________ Date

Samples Received By: ________ Date

Samples Relinquished By: ________ Date

ANALYSIS

A= Total Suspended F= ________
B= Total Metals G= ________
C= ________ H= ________
D= ________ I= ________
E= ________ J= ________

Condition of Sample Upon Receipt:

Bottles Intact? Yes / No	Volatiles Free of Headspace? Yes / No	COC Seals Present and Intact? Yes / No

Distribution:
Original - To Customer w/ Final Report
2nd Copy - To Job File
3rd Copy - To Lab

CHAIN OI)STODY

ENTACT

1360 N. Wood Dale Rd. Suite A
Wood Dale, Illinois 60191
Ph. 630/616-2100 Fax 630/616-9203

Sampler: R. REGESTER Job #: C818

ENTACT Contact: R. REGESTER Date: 6.8.03

Turnaround Time Requested

24 Hour ☐ 48 Hour ☐ 3 Day ☒ Normal ☐ Other ☐ ______

Sample No.	Matrix	Composite or Grab	Description/Remarks	Preservative	Analysis
TSP.004	Glass-filter	N/A	Hoover 7443105 - 2052 m^3 6.4.03	None	A
TSP.005			ORECK 7443106 - 1512 m^3 6.4.03		
TSP.006			EUREKA 7443107 - 1724 m^3 6.4.03		
TSP.007			ORECK 7443112 - 1454 m^3 6.6.03		
TSP.008			Hoover 7443110 - 1731 m^3 6.5.03		
TSP.009			ORECK 7443109 - 1514 m^3 6.5.03		
TSP.010			Hoover 7443111 - 2142 m^3 6.6.03		
~~AS 002~~ RR					

Samples Relinquished By: R. Regester 6.9.03 Date

Samples Received By: ______ Date

Samples Relinquished By: ______ Date

Samples Received By: ______ Date

Samples Relinquished By: ______ Date

ANALYSIS

A= Total Suspended F=
B= G=
C= H=
D= I=
E= J=

Condition of Sample Upon Receipt:

Bottles Intact? Yes / No	Volatiles Free of Headspace? Yes / No	COC Seals Present and Intact? Yes / No

Distribution:
Original - To Customer w/ Final Report
2nd Copy - To Job File
3rd Copy - To Lab

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ENTACT

1360 N. Wood Dale Rd. Suite A
Wood Dale, Illinois 60191
Ph. 630/616-2100 Fax 630/616-9203

Sampler: R. REGESTER Job #: C818

ENTACT Contact: R. REGESTER Date: 6.11.03

Turnaround Time Requested

24 Hour ☐ 48 Hour ☐ 3 Day ☒ Normal ☐ Other ☐ ____

Sample No.	Matrix	Composite or Grab	Description/Remarks	Preservative	Analysis
TSP.011	Glass filter	N/A	Hoover 7443113 1706 m^3 6.9.03	None	A
TSP.012	↓	↓	EUREKA 7443115 2166 m^3 6.9.03	↓	↓
TSP.013	↓	↓	ORECK 7443114 1817 m^3 6.9.03	↓	↓
TSP.014	↓	↓	EUREKA 7454292 1891 m^3 6.10.03	↓	↓
TSP.015	↓	↓	Hoover 7454291 1707 m^3 6.10.03	↓	↓
TSP.016	↓	↓	ORECK 7454293 1776 m^3 6.10.03	↓	↓

Samples Relinquished By: Rhonda Regester 6.11.03 Date

Samples Received By: ____ Date

Samples Relinquished By: ____ Date

Samples Received By: ____ Date

Samples Relinquished By: ____ Date

ANALYSIS

A= Total Suspended F=

B= G=

C= H=

D= I=

E= J=

Condition of Sample Upon Receipt:

Bottles Intact? Yes / No	Volatiles Free of Headspace? Yes / No	COC Seals Present and Intact? Yes / No

Distribution:

Original - To Customer w/ Final Report
2nd Copy - To Job File
3rd Copy - To Lab

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1360 N. Wood Dale Rd. Suite A
Wood Dale, Illinois 60191
Ph. 630/616-2100 Fax 630/616-9203

Sampler: K. Sutliff Job #: C818

ENTACT Contact: R. REGESTER Date: 7.8.03

Turnaround Time Requested
24 Hour ☐ 48 Hour ☐ 3 Day ☐ Normal ☒ Other ☐

Sample No.	Matrix	Composite or Grab	Description/Remarks Date	Name	Filter #	m^3	Preservative	Analysis
TSP.017	Glass Filter	N/A	6.11.03	Eureka	7443116	2081 m^3	None	A, B
TSP.018	↓	↓	6.11.03	Oreck	7454294	1812 m^3	↓	↓
TSP.019			6.16.03	Eureka	7454296	2280 m^3		
TSP.020			6.16.03	Oreck	7454297	1944 m^3		
TSP.021			6.18.03	Oreck	7454202	1980 m^3		
TSP.022			6.18.03	Eureka	7454201	2915 m^3		
TSP.023			6.24.03	Hoover	7454206	2496 m^3		
TSP.024			6.24.03	Eureka	7454208	2575 m^3		
TSP.025			6.24.03	Oreck	7454207	2535 m^3		
~~TSP.026~~			~~6.25.03~~	~~Oreck~~	~~7454210~~	~~2379 m^3~~		RR

Samples Relinquished By: Rhonda Regester 7.8.03 Date

Samples Received By: ________ Date

Samples Relinquished By: ________ Date

Samples Received By: ________ Date

Samples Relinquished By: ________ Date

ANALYSIS

A= Total Particulates F=
B= M1 Metals G=
C= H=
D= I=
E= J=

Condition of Sample Upon Receipt:

Bottles Intact? Yes / No	Volatiles Free of Headspace? Yes / No	COC Seals Present and Intact? Yes / No

Distribution:
Original - To Customer w/ Final Report
2nd Copy - To Job File
3rd Copy - To Lab

CHAIN OI)STODY

ENTACT

1360 N. Wood Dale Rd. Suite A
Wood Dale, Illinois 60191
Ph. 630/616-2100 Fax 630/616-9203

Sampler: K. Sutliff Job #: C818

ENTACT Contact: R. Regester Date: 7.8.03

Turnaround Time Requested

24 Hour ☐ 48 Hour ☐ 3 Day ☐ Normal ☒ Other ☐ ______

Sample No.	Matrix	Composite or Grab	Description/Remarks Date	Name	Filter #	m³	Preservative	Analysis
TSP.026	Glass Filter	N/A	6.25.03	Oreck	7454210	2379 m³	None	A, B
TSP.027	↓	↓	6.25.03	Eureka	7454211	2509 m³	↓	↓
TSP.028	↓	↓	6.25.03	Hoover	7454209	2452 m³	↓	↓

Samples Relinquished By: Rhonda Regester 7.8.03 Date

Samples Received By: ______ Date

Samples Relinquished By: ______ Date

Samples Received By: ______ Date

Samples Relinquished By: ______ Date

ANALYSIS

A= Total Particulates F=

B= MI Metals G=

C= H=

D= I=

E= J=

Condition of Sample Upon Receipt:

Bottles Intact? Yes / No	Volatiles Free of Headspace? Yes / No	COC Seals Present and Intact? Yes / No

Distribution:

Original - To Customer w/ Final Report
2nd Copy - To Job File
3rd Copy - To Lab

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CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 1 of 1

Section A — Required Client Information:

Company	Entact
Address	425 W. Frank St. Fowlerville Mi. 48836
Phone	517-223-7633
Fax	517-223-7636

Section B — Required Client Information:

Report To:	Kurt Sutliff
Copy To:	Entact - Fowlerville
Invoice To:	SAME
P.O.	
Project Name:	Stanley tool
Project Number:	C 818

Client Information (Check quote/contract):

Requested Due Date: 09-01-03 | *TAT: 3 day TAT

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.

Turn Around Time (TAT) in calendar days.

Section C — To Be Completed by Pace Analytical and Client

Quote Reference:	
Project Manager:	
Project #:	
Profile #:	

Requested Analysis: Total Particulates; Mi. Metals

Section D — Required Client Information:

SAMPLE ID — One character per box. (A–Z, 0–9 / .–) Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — WATER WT; SOIL SL; OIL OL; WIPE WP; AIR AR; TISSUE TS; OTHER OT

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED mm/dd/yy	TIME COLLECTED hh:mm a/p	# Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Total Particulates	Mi. Metals	Volume (M^3) ~~Remarks / Lab ID~~
1	TSP-029	AR	07-01-03			X										2627
2	TSP-030	AR	07-01-03													1730
3	TSP-031	AR	07-01-03													1739
4	TSP-032		07-08-03													~~2~~ 2730
5	TSP-033		07-08-03													1692
6	TSP-034		07-08-03													1933
7	TSP-035		07-15-03													2748
8	TSP-036		07-15-03													1693
9	TSP-037		07-15-03													1914
10	TSP-038		7-22-03													4373
11	TSP-039		7-22-03													2720
12	TSP-040		7-22-03													2216

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS
Fed Ex	830601835200	7-24-03	

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	Kurt Sutliff	7-24-03	1000			

SAMPLE CONDITION

Temp in °C	
Received on Ice	Y/N
Sealed Cooler	Y/N
Samples Intact	Y/N

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kurt Sutliff

SIGNATURE of SAMPLER: Kurt Sutliff

DATE Signed: (MM / DD / YY) 7-23-03

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The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

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Page: 1 of 1

Section A Required Client Information:

Company: Entact
Address: 425 W. Frank St.
Fowlerville, Mi. 48836
Phone: 517-223-7633
Fax: 517-223-7636

Section B Required Client Information:

Report To: DAN DUNCAN
Copy To: Entact - Fowlerville
Invoice To: SAME
P.O.
Project Name: Stanley Tool
Project Number: C 818

Client Information (Check quote/contract):
Requested Due Date: 8-19-03
*TAT: 5 days

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.
Turn Around Time (TAT) in calendar days.

Section C To Be Completed by Pace Analytical and Client

Quote Reference:
Project Manager:
Project #:
Profile #:
Requested Analysis: total Particulates; total Pb, Cr, As

Section D Required Client Information:

SAMPLE ID
One character per box.
(A–Z, 0–9 / .–)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes MATRIX	CODE
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED mm/dd/yy	TIME COLLECTED hh:mm a/p	# Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	total Particulates	total Pb, Cr, As	Volume (m^3) ~~Remarks / Lab ID~~
1	TSP-041		08-07-03			X								X	X	3819
2	TSP-042		8-07-03			X								X	X	2485
3	TSP-043		8-07-03			X								X	X	2004
4																
5																
6																
7																
8																
9																
10																
11																
12																

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS
Fed Ex.	841756844494	08-11-03	

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	Kurt Sutliff	8-11-03	1000			

SAMPLE CONDITION

Temp in °C	
Received on Ice	Y/N
Sealed Cooler	Y/N
Samples Intact	Y/N

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Kurt Sutliff
SIGNATURE of SAMPLER: Kurt Sutliff
DATE Signed: (MM / DD / YY) 8-11-03

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The Chain …tody is a LEGAL DOCUMENT. All relevant fields must be completed accurat…

711925

Page: 1 of 1

Section A — Required Client Information:

Company	Entact
Address	425 W. Frank St.
	Fowlerville, Mi 48836
Phone	517 223-7633
Fax	517 223-7636

Section B — Required Client Information:

Report To:	Dan Duncan
Copy To:	Entact - Fowlerville
Invoice To:	Same
P.O.	
Project Name:	Stanley Tool
Project Number:	C 818

Client Information (Check quote/contract):

Requested Due Date:	*TAT:
9-16 03	5 days

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.

Turn Around Time (TAT) in calendar days.

Section C — To Be Completed by Pace Analytical and Client

Quote Reference:	
Project Manager:	
Project #:	
Profile #:	

Requested Analysis: Total Particulates; Total Pb, Cr, As

Section D — Required Client Information:

SAMPLE ID

One character per box.
(A–Z, 0–9 / .–)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes MATRIX	CODE
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED mm / dd / yy	TIME COLLECTED hh:mm a/p	# Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Total Particulates	Total Pb, Cr, As	volume (m^3) ~~Remarks / Lab ID~~
1	TSP-044	AR	08 14 03			X								X	X	4140
2	TSP-045		8 14 03											X	X	2733
3	TSP-046		8 14 03											X	X	3074
4	TSP-047		8 21 03											X	X	4896
5	TSP-048		8 21 03											X	X	3303
6	TSP-049		8 21-03											X	X	2292
7	TSP-050		8-27 03											X	X	4240
8	TSP-051		8 27 03											X	X	2682
9	TSP-052		8-27-03											X	X	2616
10	TSP-053		9 03 03											X	X	11094
11	TSP-054		9 03 03											X	X	2529
12	TSP-055		9 03-03											X	X	1868

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS	ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Fed-Ex	841756844369	9-8 03			Kurt Sutliff	9-8-03	1430			

SAMPLE CONDITION

Temp in °C	
Received on Ice	Y/N
Sealed Cooler	Y/N
Samples Intact	Y/N

SAMPLE NOTES

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kurt Sutliff

SIGNATURE of SAMPLER: Kurt Sutliff

DATE Signed: (MM / DD / YY) 9-8-03

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Form COC01 Rev 0402

FINAL CORRECTIVE MEASURES PROPOSAL
FORMER STANLEY TOOLS
FOWLERVILLE, MICHIGAN

Prepared for:

Johnson Controls, Inc.
Plymouth, Michigan

Prepared by:

Earth Tech, Inc.
36133 Schoolcraft Road
Livonia, Michigan 48150

and

Weston Solutions, Inc
Suite 100
2501 Jolly Road
Okemos, MI 48864

February 2004

TABLE OF CONTENTS

SECTION NO.	TITLE	PAGE NO.

FIGURES

APPENDICES

1. INTRODUCTION

Johnson Controls, Inc. (JCI) currently holds Resource Conservation and Recovery Act (RCRA) corrective action responsibility at the Former Stanley Tools (FST) site in Fowlerville, Michigan. Earth Tech, Inc., Weston Solutions, Inc. (WESTON), and ENTACT were contracted by JCI during 2003 to provide project management, engineering, and construction services to complete site characterization, remediation, and reporting activities. JCI's ultimate goal for the FST project is to eliminate unacceptable risks to public health and the environment resulting from past releases, and to redevelop the property for beneficial use.

This Final Corrective Measures Proposal (FCMP) has been prepared based upon the findings of extensive RCRA Facility Investigation (RFI) activities, Interim Measures (IM) effectiveness evaluations, and risk-based data assessments, and the application of Michigan Public Act 451, Part 201 rules and associated Michigan Department of Environmental Quality (MDEQ) guidelines, and other Applicable or Relevant and Appropriate Requirements (ARARs).

The remainder of Section 1 summarizes key components of the Administrative Order on Consent (AOC) negotiated between JCI and EPA for the FST site during 2002, describes the site location, background, and corrective action history, and presents an overview of the physical site setting, including surficial features and hydrogeological conditions. Section 2 summarizes the nature and extent of soil, groundwater, and sediment contamination, and presents an overview of recently completed Environmental Indicator (EI) control determinations. Section 3 describes the IMs completed during 2003 along with assessments of their effectiveness in remediating impacted media at the site. Sections 4, 5, and 6 describe the screening, evaluation, and selections of long-term corrective measures for groundwater, soil, and sediments, respectively.

1.1 PERFORMANCE-BASED CONSENT ORDER

In October 2002, EPA provided a draft AOC to JCI, and through negotiations, a final AOC was executed in December 2002 for the FST site. As shown in **Appendix A**, several key aspects of AOC are:

- *This was a performance-based AOC; the RCRA corrective action process requirements imposed by EPA were significantly streamlined, reducing and/or eliminating the need for formal submittals, approvals to proceed with investigative or remedial activities, etc.*

- *The AOC was focused on the submittal of the EI Reports (demonstrating stabilization of impacted groundwater migration, and positive control of human health exposures) by February 15, 2004. Early submittal of the EI Reports (in November 2003) provided for EPA review and revisions of the EI Reports as necessary, to meet the deadline.*

- *Concurrent with the submittal of the EI Reports, this FCMP was required to be submitted by February 15, 2004.*

- *Additionally, EPA stated that JCI may apply Michigan P.A. 451, Part 201 cleanup criteria and protocols in complying with the AOC.*

1.2 SITE LOCATION AND HISTORY

The FST site is located at 425 Frank Street, in Fowlerville, Livingston County, Michigan (**Figure 1**). It is approximately 14 acres in size and is currently unoccupied. Existing site features include the former developed portion consisting of a large, recently regraded and seeded area (where the main buildings, treatment plants, and operating plant facilities were formerly located), an adjacent former parking area (remnants of the asphalt surfacing are still present), and an undeveloped portion consisting of forested wetland and marsh.

The legal description of the property refers to the following lots: "Lots 16, 17, 18, 19, 20, 21, 38, 39, 40, 41, 42, 43, 51, 52, and the north 344.5 feet of lot 44 and the south 267.3 feet of lot 44, except the north 132 feet of the east 198 feet of "Assessor's Plat of Commercial Addition," Village of Fowlerville, Livingston County, Michigan. The majority of the Site is located in the southeast quarter of Section 10, T3N, R3E with a very small portion on the southern end located in the northeast quarter of Section 15, T3N, R3E. The site is bordered to the north by the Copeland Construction property and Grand River Avenue, to the south by the CSX rail line, to the west by the Red Cedar River, and to the east by Veterans Drive (formerly Detroit Street). The area surrounding the site is largely commercial and light industrial with some interspersed residential properties to the north, east, and south. A variety of businesses operate in the immediate vicinity of the site, including; a metals shop, an auto parts store, an auto body shop, a video store, a warehouse, and the local VFW hall.

In 1949, Utilex Manufacturing Company first developed the FST site for zinc die casting operations. The plant underwent several expansions and ownership transfers between 1949 and 1980. Stanley Tool purchased the plant to make hand tools in 1980. Various plating operations continued at the site until 1985. Plating operations produced a variety of liquid wastes and sludges that were treated on-site using multiple treatment/holding pits and/or lagoons. Several known spills and releases of wastes were documented over the years that resulted in contamination of several areas of the site. Wastes were known to have been discharged onto the soil surface at various locations, in two drainage ditches, and into the Red Cedar River. The plant was closed in 1985 and remained unused until 1993, when building demolitions were completed. JCI assumed responsibility for site cleanup efforts with the purchase of Stanley Tools.

Several environmental activities were performed at the FST site between 1988 and 2002, including multiple soil and water investigations, sampling and analysis, a RFI, and several IMs. These activities were summarized in a RFI Report submitted to the EPA in October 2001. In October 2002, EPA submitted comments on the RFI Report to JCI along with the draft AOC. The final AOC was executed for the FST site in December 2002 that enhanced JCI's ability to complete site cleanup activities and the implement property redevelopment efforts.

1.3 PHYSICAL SETTING

Much of the physical setting description summarized below is derived from the October 2001 RFI Report, with some site descriptions updated based on more recent project activities, property modifications, and expanded site characterization efforts.

1.3.1 Surface Topography

The Fowlerville area is located on a glacial moraine that is characterized by hummocky topography with low hills and valleys. The area is moderately to poorly drained, creating swamp conditions in most of the low-lying areas. Topographic relief in the site area is subdued, ranging from approximately 881 feet above mean sea level (amsl) near the Red Cedar River to approximately 888 feet amsl near Frank Street. The entire area of the property that was previously developed and used during past plant operations was regraded as part of the IM activities completed in 2003. Current surface grades onsite slope gently westward to the river, with localized slopes toward drainage ditches.

1.3.2 Hydrology

The FST site is located along the east bank of the Red Cedar River, which flows northward through the City of Fowlerville beyond municipal storm water outfalls and the Fowlerville sewage treatment plant located almost 1 mile north of the site. The Red Cedar River at Fowlerville has a drainage area of

64 square miles, and the river is part of the Grand River drainage basin system. The average river discharge is approximately 28 cubic feet per second (cfs) (MDEQ Discharge Request, April 30, 2003 email to Earth Tech).

All surface water drainage at the FST site is to the Red Cedar River via sheet flow and two drainage ditches onsite termed the North Ditch and the South Ditch. A County storm sewer outfall also discharges into the North Ditch on site. The western and northern portions of the FST site are located within the 100-year floodplain, represented by the 886 feet amsl topographic elevation contour.

1.3.3 Hydrogeology

Regional geology is comprised of unconsolidated glacial sediments having total thicknesses between 20 and 200 feet that overlay upper Paleozoic shales and sandstones. The upper most bedrock beneath the FST site is part of the lower Mississippian Coldwater Shale that contains some sandstone and limestone.

The site hydrogeology is characterized by upper unconsolidated deposits that comprise the shallow aquifer, lower unconsolidated deposits comprised of typical aquitard characteristics, and siltstone/shale/sandstone bedrock. The upper unconsolidated deposits are predominantly layers of silty sands that include lenses of clay and silt. The thickness of the upper unconsolidated deposits is typically between 10 feet and 15 feet. In the RFI, the horizontal saturated hydraulic conductivities in the upper unconsolidated deposits, based on site aquifer tests, were reported to range from 2.4×10^{-4} centimeters per second (cm/s) to 4.8×10^{-3} cm/s. In-situ horizontal hydraulic conductivity testing performed in November 2003 range from 2.2×10^{-3} to 4.6×10^{-3} cm/sec in the upper aquifer.

Prior to the 2003 IM excavation of contaminated soils at the site, the shallow aquifer likely exhibited confined groundwater flow conditions in portions of the site due to an overlying clay layer extending from the ground surface to a depth of approximately 10 feet. During soil excavation, this clay layer (and associated soil and groundwater/free phase contaminants) were removed and transported off-site for disposal. The resulting excavation was subsequently backfilled with coarser grained fill material resulting in a shallow aquifer at water table conditions. Comparison of the shallow aquifer groundwater flow direction before and after excavation indicates that no significant change in flow direction has occurred as a result of the contaminated soil excavation activities. The shallow aquifer remains under confined groundwater flow conditions in the eastern portion of the site where excavation activities were not required. The change from confined to unconfined water table conditions does not appear to effect the groundwater flow direction in the upper aquifer.

The lower unconsolidated deposits are predominantly layers of clay and silt that include lenses of silty sand. The lower unconsolidated deposits extend from the base of the upper aquifer to the top of bedrock. The thickness of the lower unconsolidated deposits ranges from about 5 feet to 30 feet. Lower unconsolidated deposits extend across the site and limit the potential for the vertical migration of contaminants.

In the RFI, the saturated vertical hydraulic conductivity in the lower unconsolidated deposits, based on laboratory analysis, was reported to range from about 10^{-9} cm/s to 10^{-7} cm/s. Geotechnical analytical results from tests conducted during 2003 for the lower unconsolidated deposits showed vertical hydraulic conductivities ranging from 5.7×10^{-7} cm/s to 1.4×10^{-7} cm/s. In the RFI, the horizontal saturated hydraulic conductivities in the lower unconsolidated deposits based on site aquifer tests were reported to range from 9.5×10^{-5} to 7.4×10^{-4} cm/sec.

Horizontal groundwater flow within the shallow aquifer is from east to west across the FST site toward the Red Cedar River, which is the regional groundwater discharge zone. The horizontal hydraulic gradient across the FST site is about 0.01 feet per foot (ft/ft). This horizontal hydraulic gradient, in conjunction with a hydraulic conductivity geometric mean of 1.1×10^{-3} cm/sec, results in an average linear groundwater flow velocity of 0.13 feet per day. **Figure 2** shows the shallow potentiometric surface map based on groundwater elevation measurements collected on December 18, 2003.

Horizontal groundwater flow within the upper bedrock is also east to west across the site toward the Red Cedar River. The horizontal hydraulic gradient across the FST site is 0.007 ft/ft. This horizontal hydraulic gradient, in conjunction with a hydraulic conductivity geometric mean of 4.8×10^{-4} cm/sec, results in an average linear groundwater flow velocity of 0.05 feet per day in the bedrock. The bedrock groundwater flow west of the Red Cedar River is also toward the river.

To evaluate the potential for the vertical migration of groundwater contaminants, vertical hydraulic gradients were determined from groundwater level measurements at well nest locations where shallow and deep wells were located in close proximity. A downward component of flow from the shallow aquifer to the bedrock aquifer was measured at well nest locations east of the river, while an upward component to flow was measured primarily at locations adjacent to the river and at all locations west of the river in the lowland/floodplain corridor. Upward vertical gradients ranging from 0.04 ft/ft to 0.001 ft/ft are present adjacent to the Red Cedar River and within the lowland/floodplain corridor. Upward groundwater flow gradients were also measured at well nest MW-03/MW-03C on the east margin of the site, and those gradients are possibly due to the presence of the upper shallow aquifer being under confined conditions in that area. The downward hydraulic gradients measured on the site and east of the river and ranged from 0.002 ft/ft (very low) to 0.04 ft/ft. The vertical hydraulic gradient data is consistent with flow within a local discharge area and indicates that groundwater flow from the surrounding uplands to the east and west of the river discharges into the river and lowland area. The data also suggests a possible correlation with the bedrock surface topography, as all of the downward gradients are present at locations where the bedrock surface is lower than 850 feet amsl.

2. NATURE AND EXTENT OF CONTAMINATION

2.1 SOIL

Extensive surface and subsurface soil sampling activities were completed during historical and recent site characterization efforts. Data were collected in 1994-2000 by URS, Inc. as part of the RFI. Recent data were collected in 2003 by ETW to further characterize the site, support IM excavation tasks, verify that the contamination was removed from the site, and determine if the contamination had migrated off-site. Soil samples collected by ETW were collected as part of the new performance based AOC, via data gaps sampling or IM verification sampling.

During the summer and fall of 2003, soil at the site was excavated to remove source materials contributing to unacceptable exposures. This IM resulted in the removal and appropriate disposal of approximately 83,900 tons of contaminated soil, verification sampling and analyses to confirm removal, and backfilling of excavated areas with clean fill material. Excavation proceeded to the water table at approximately 95% of the excavation areas. Excavation depths ranged from 4 to 8 feet, depending on the depth of the water table. Free product at the site (kerosene) was also excavated and removed.

2.1.1 Surface Soil

To evaluate the nature and extent of residual contamination in surface soil, analytical data was compared to MDEQ Part 201 Generic Cleanup Criteria. The applicable Part 201 soil criteria includes; residential drinking water protection, GSI protection, GSI protection-human health based, volatilization to indoor and ambient air, particulate inhalation industrial/commercial II direct contact, and Statewide default background.

VOCs

VOCs in surface soil with concentrations above comparison criteria include methylene chloride and trichloroethene (TCE), which exceed residential drinking water protection default criteria. These exceedances were found in three samples, all of which were located at the southeast side of the property.

SVOCs

SVOCs in surface soil with concentrations above comparison criteria include fluoranthene (GSI protection), and fluoranthene and pyrene (GSI protection-human health based). These exceedances were observed at one sample location in the north central portion of the site.

Inorganics

Inorganics in surface soil with concentrations above comparison criteria include: arsenic and total cyanide (residential drinking water protection); arsenic, hexavalent chromium, copper, mercury, selenium, silver, cyanide, and zinc (GSI protection); arsenic, copper, lead, mercury, and zinc (GSI protection-human health based); and arsenic (direct contact). Arsenic was detected in surface soil exceeding direct contact criteria (37 mg/kg) at three discrete sample locations at concentrations ranging from 40 to 44 mg/kg. The application of MDEQ-approved statistical analyses of the direct contact exceedances showed that the actual risk levels were acceptable (**Appendix B**).

PCBs

No PCBs in surface soil exceeded Part 201 criteria.

2.1.2 Subsurface Soil

To evaluate the nature and extent of residual contamination in surface soil, analytical data was compared to the same Part 201 Generic Cleanup Criteria as listed for surface soils above.

VOCs

VOCs in subsurface soil having concentrations above comparison criteria include methylene chloride and TCE (residential drinking water protection). These exceedances were found primarily near the southeast portion of the property.

SVOCs

No SVOCs in surface soil exceeded default Part 201 criteria.

Inorganics

Inorganics in subsurface soil having concentrations above comparison criteria include: arsenic, (residential drinking water protection); arsenic, hexavalent chromium, selenium, silver, cyanide, mercury, and zinc (GSI protection); and arsenic, lead, mercury, and zinc (GSI protection-human health based).

PCBs

No PCBs in surface soil exceeded default Part 201 criteria.

2.2 GROUNDWATER

As part of the ETW corrective action program, groundwater samples were collected from on- and off-site monitoring wells between March 2003 and January 2004. **Figure 2** shows the locations of all monitoring wells. All samples were analyzed for VOCs, SVOCs, PCBs, total Michigan 10 metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver, zinc), total nickel, chromium VI, and free cyanide. If the samples were turbid, a filtered sample was also analyzed for metals. The primary findings of the groundwater characterization efforts conducted by ETW are summarized below.

VOCs

VOCs detected in groundwater samples collected during the ETW site characterization effort primarily included TCE and various breakdown compounds, such as cis-1,2-dichloroethene (cis-1,2-DCE), and vinyl chloride. Groundwater containing VOCs are restricted to the shallow aquifer at the southern portion of the site. This VOC plume migrates westward to the Red Cedar River, as depicted in **Figure 3**, that shows the October 2003 TCE plume. Based on historical concentrations, VOC concentrations are generally stable or decreasing over time.

Groundwater analytical data was compared to Part 201 GSI criteria for on-site locations, and to GSI and residential drinking water criteria for off-site locations. This comparison identified TCE, cis-1,2-DCE, and vinyl chloride at on-site monitoring well locations above GSI criteria..

Groundwater samples obtained from off-site monitoring wells locations identified VOCs above GSI and residential drinking water criteria. Specifically, samples from MW-OS3, located immediately west of the river, contained vinyl chloride above both the GSI and residential drinking water criteria.

SVOCs

None of the groundwater samples collected from monitoring wells currently on- or off-site had any SVOC detections above Part 201 criteria.

PCBs

None of the groundwater samples collected from monitoring wells currently on- or off-site had any PCB detections above Part 201 criteria.

Metals

On-site monitoring well samples were found to contain metals (arsenic, copper, nickel, and chromium VI) above GSI criteria. Groundwater containing metals above GSI criteria is primarily located at the southwestern portion of the site. This area correlates to Solid Waste Management Unit (SWMU) B, which is associated with the past handling of plating wastes. These GSI criteria exceedances have only been identified in the shallow aquifer, no exceedances have been observed in deep well samples.

The arsenic GSI exceedance occurred in the March 2003 groundwater sample of well MW-A1 located near the center of the site. This well was subsequently removed during IM excavation activities and replaced by MW-23. The groundwater samples subsequently collected from MW-23 in October and November 2003 did not contain arsenic above the GSI criterion.

Nickel GSI exceedances occurred near the southwest margin of the site in samples from MW-B3, MW-08, and MW-25.

Copper GSI exceedances occurred near the western portion of the site in samples collected from wells MW-08 and MW-18 in October 2003, but the November 2003 sample results were below criteria.

Chromium VI GSI exceedances occurred near the western portion of the site in samples from three wells (MW08, MW18, and MW22) during October 2003, but the November 2003 sample results were below criteria.

Cyanide

Groundwater samples contained free cyanide at levels above GSI criteria from on-site and off-site monitoring wells. Exceedances were noted in samples collected from shallow aquifer and bedrock aquifer wells. Cyanide GSI exceedances occurred at the central to western portion of the site (shallow and bedrock), west of the Red Cedar River (shallow and bedrock), south of the railroad tracks (shallow and bedrock), and at the eastern portion of the site (shallow). Although the GSI criterion is exceeded in off-site groundwater, none of the detected concentrations exceeded the residential DW criterion.

Final Acute Values (FAVs)

There were no groundwater sample exceedances of any Part 201 FAVs at any monitoring well locations adjacent to the Red Cedar River. This is an important groundwater quality factor, since the MDEQ does not allow the use of GSI mixing zones for locations having FAV exceedances.

2.3 SEDIMENT

Appendix C contains the Sediment Technical Memorandum prepared by ETW as part of the 2003-2004 corrective action project. It provides a comprehensive description the Red Cedar River sediment characterization scope and methods, data analyses and interpretations, risk-based criteria comparisons, conclusions and recommendations. The following summary of the nature and extent of sediment contamination is excerpted from that document.

Nature and Extent Discussion

A total of 271 sediment samples were collected from the Red Cedar River between the I-196 freeway south/upstream of the site and Gregory Road located north and downstream of the site. Most of the samples were collected between the railroad bridge adjacent to the south property boundary and the Grand River Avenue bridge over the river at the north property boundary. Of these, 76 were collected and analyzed as part of the RFI prior to 2003 and 195 were collected and analyzed by ETW during 2003. The ETW samples were collected from two depths at most locations and three depths at a few locations. The vertical extent of impact is limited by a compacted layer of fine sand underneath less-compacted soft sediments. All of the ETW samples were analyzed for VOCs, SVOCs, Michigan 10 metals plus nickel and hexavalent chromium, cyanide, and PCBs using EPA and MDEQ-approved laboratory methods.

The area near transect A is impacted with VOCs, PNAs, and certain metals [in relation to the aquatic life criteria: Probable Effect Concentrations (PECs)]. Samples from transect B, which is just downstream of transect A, met all criteria.

Samples collected from the area near transects D and E had the highest concentrations of chemicals and the highest potential to be toxic to aquatic life, based on the PEC quotients. This area was defined by transects B and F in which no samples exceeded criteria for protection of aquatic life. All of the concentrations of PCBs above the 1mg/kg criterion occurred in this area. This is the area where the former outfall was located that discharged treated effluent from the wastewater treatment facilities near SWMU A.

Transect F was not impacted, but several samples in transect G, H, and I were impacted, as well as RFI samples from the area of Transects G, H and I did have concentrations of some chemicals above the screening criteria. Concentrations of VOCs, PNAs, PCBs and metals were generally lower than upstream locations. Concentrations downstream of Transect I are generally lower than upstream locations and the PEC quotients are also lower. The PEC quotient criterion was exceeded by one sample in each of the transects (J, K, L and M). The chemicals most responsible for the exceedances are arsenic, chromium, copper, lead, nickel and zinc. The downstream limit of this general area is defined approximately by the samples closest to the bridge (SE/RC-20/1, SE/RC-8/1 and SE/RC-8/2), in which the PEC quotients were less than the criterion.

Some samples collected during the RFI downstream of Grand River Avenue had concentrations of some PNAs and metals above PEC quotients. These locations are downstream of a large ditch that flows into the river between Grand River Avenue and the municipal wastewater treatment ponds and are separated from the site by a number of samples that met all criteria. This suggests this ditch is the source of impacts to the sediments in these downstream samples rather than the FST site.

ETW completed a preliminary Surface Weighted Area Concentration (SWAC) analysis for all of the 2003 sediment sample locations. Notably, the SWAC analysis for PCBs was completed for all RFI and 2003 sediment sample locations since all locations were tested for PCBs. The comparison of SWAC values to PECs showed no exceedances for any VOC, SVOC, inorganic, or total PCB constituents.

General Sediment Characterization Conclusions

As excerpted from the Sediment Technical Memorandum presented in **Appendix B**, the following conclusions were made:

1. The potentially complete human health exposure pathways for which applicable criteria are not exceeded are: direct contact, incidental ingestion, protection of surface water, and protection of ambient air.

2. The potentially complete exposure pathway for which applicable criteria are exceeded is: protection of aquatic life.

3. The risk-based sediment criterion for PCBs is 7.68 mg/kg. Sediment PCB concentrations exceeded this criterion at only two locations. The average sediment PCB concentration was much less than this criterion. The fish bioaccumulation pathway is not significant because the sediment quality overall meets the site-specific PCB criterion for protection of human health.

4. PCBs were not detected in the floodplain soil samples collected on the west side of the river, opposite the FST plant site.

5. The SWACs of all chemicals, including PCBs in the 2003 investigation area (between the railroad bridge at the south side of the FST site and the Grand River Avenue Bridge north of the site) are all less than PEC criteria for protection of aquatic life.

6. The SWAC of PCBs in the combined RFI and 2003 investigation areas (between the railroad bridge at the south side of the site and Gregory Road approximately 2 miles north of the site) was less than the 7.68 mg/kg risk-based criterion and the 1 mg/kg regulatory criterion.

7. The point-by-point sediment comparisons identify areas of the river near the site that need further evaluation.

8. There is evidence that impacts to sediments near the municipal wastewater lagoons is not related to the site but originates from another source.

9. The unconsolidated sediments are approximately 2 feet deep in most areas and are underlain by a dense layer of silt and sand that is visually distinct from the unconsolidated sediments.

2.4 SUMMARY OF ENVIRONMENTAL INDICATOR CONTROLS

ETW provided the EPA with two draft EI Reports demonstrating control of contaminated groundwater migration (CA 750) and current human exposures (CA 725) in November 2003. Subsequent to these draft submittals, JCI and ETW staff met with EPA in December 2003 to discuss any preliminary review comments and ascertain whether the EPA concurred with the control demonstrations as presented. ETW provided a Supplemental Hydrogeologic Assessment to EPA in January 2004 in response to some of the EPA comments provided during that meeting. All other EPA review comments were addressed in the final EI Reports that were submitted to the EPA concurrent to this FCMP in February 2004. Subsections 2.4.1 and 2.4.2 summarize the responses to each of the questions posed in CA 750 and CA 725, respectively.

2.4.1 Control of Contaminated Groundwater Migration (CA 750)

Question 1: *Has **all** available relevant/significant information on known and reasonably suspected releases to the groundwater media, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?*

Response: *Yes.*

Question 2: *Is **groundwater** known or reasonably suspected to be "**contaminated**"[1] above appropriately protective "levels" (i.e., applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action, anywhere at, or from, the facility?*

Response: *Yes.*

Question 3: *Has the **migration** of contaminated groundwater **stabilized** (such that contaminated groundwater is expected to remain within "existing area of contaminated groundwater"[2] as defined by the monitoring locations designated at the time of this determination)?*

Response: *Yes.*

Question 4: *Does "contaminated" groundwater **discharge** into **surface water** bodies?*

Response: *Yes.*

Question 5: *Is the* ***discharge*** *of "contaminated" groundwater into surface water likely to be* ***"insignificant"*** *(i.e., the maximum concentration[3] of each contaminant discharging into surface water is less than 10 times their appropriate groundwater "level," and there are no other conditions (e.g., the nature, and number, of discharging contaminants, or environmental setting), which significantly increase the potential for unacceptable impacts to surface water, sediments, or eco-systems at these concentrations)?*

Response: *No.*

Question 6: *Can the* ***discharge*** *of "contaminated" groundwater into surface water be shown to be* ***"currently acceptable"*** *(i.e., not cause impacts to surface water, sediments, or eco-systems that should not be allowed to continue until a final remedy decision can be made and implemented[4])?*

Response: *Yes.*

Question 7: *Will groundwater* ***monitoring****/measurement data (and surface water/sediment/ecological data, as necessary) be collected in the future to verify that contaminated groundwater has remained within the horizontal (or vertical, as necessary) dimensions of the "existing area of contaminated groundwater?"*

Response: *Yes.*

Question 8: *Check the appropriate RCRIS status codes for the Migration of Contaminated Groundwater Under Control EI (event code CA750), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (attach appropriate supporting documentation as well as a map of the facility).*

Response: *Yes.*

Based on the supported documentation of answers to CA 750 questions 1 through 7, JCI and ETW expect the EPA will concur that a full determination of control has been demonstrated for the migration of groundwater contamination at the FST site.

2.4.2 Control of Current Human Exposures (CA 725)

Question 1: *Has* ***all*** *available relevant/significant information on known and reasonable suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been* ***considered*** *in this EI determination?*

Response: *Yes.*

Question 2: *Are groundwater, soil, surface water/sediments, or air* **media** *known or reasonably suspected to be* **"contaminated"** *(1) above the Part 201, Environmental Remediation, of Act 451 cleanup criteria from releases subject to RCRA Corrective Action, anywhere at, or from, the facility?*

Response: *Yes.*

Question 3: *Are there complete pathways between "contamination" and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?*

Response: *Yes.*

Question 4: *Can the exposures from any of the complete pathways identified in #3 be reasonably expected to be significant (i.e., potentially "unacceptable" because exposures can be reasonably expected to be:*

1) greater in magnitude (intensity, frequency, and/or duration) than assumed in the derivation of the acceptable levels used to identify the contamination; or

2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable levels) could result in greater than acceptable risks?

Response: *No.*

Question 5: *Skipped per Question 4 response.*

Question 6: *Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA 725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (reference appropriate supporting documentation as well as a map of the facility):*

Response: *Yes*

Based on the supported documentation of answers to CA 725 questions 1 through 5, JCI and ETW expect the EPA will concur that a full determination of control has been demonstrated for current human exposures at the FST site.

3. INTERIM MEASURES COMPLETED

3.1 OVERVIEW OF IM STRATEGIES AND COMPLETED EFFORTS

IMs have been implemented at the site that will have effects on soil, groundwater and sediment concentrations both immediately and over time. As more fully described in the IM Report presented in **Appendix D**, IMs consisted of the excavation and off-site disposal of over 83,000 tons of impacted soil, including Toxic Substances Control Act (TSCA) waste (PCBs >50 ppm), F001 listed waste, and inorganics-impacted soils (metals and cyanide). Free product (kerosene) at the site was also excavated and removed. Excavations proceeded to the water table at approximately 95 percent of the total excavation area and encompassed all SWMUs at the site except for SWMUs A and G, which were previously remediated. Excavation depths generally ranged from 4 to 8 feet, depending on the depth to the water table.

The IMs were completed using the Observational Method. Available soil analytical data were used to identify areas for excavation. Pre-IM investigative work was only completed when necessary to support waste determinations (i.e., areas were not fully defined prior to excavation). Following identification of areas for excavation, work began and proceeded based on visual observation and in-field sample screening. Following completion of excavation activities for a particular area, confirmation sampling was completed to verify cleanup to the GSI criteria in accordance with MDEQ guidance (Verification of Soil Remediation, April 1994).

The area previously shown to contain phase separated kerosene on the water table (SWMU C) was remediated by over-excavating into the water table, thereby removing the kerosene and impacted soils within the capillary fringe and upper one to two feet of the saturated zone. Fly ash was added to the excavated soils from this area to aid in the drying and transportation of the material to the disposal facility. Additionally, kerosene was systematically skimmed from the standing water within the excavation on a daily basis, using absorbent pads, booms, and pumps. Recovered liquids were containerized for subsequent off-site disposal.

All excavation areas were backfilled using clean sand fill. The majority of the site was returned to previous grade to support property redevelopment. The northwestern part the site, between SWMU A and the Red Cedar River, is within the 100-year floodplain; it was returned to an elevation below pre-existing grade to increase the volume of the floodplain and provide an area for wetland-type habitat.

After being returned to grade, all excavation areas were covered with a 6-inch lift of topsoil and seed. All excavations, backfilling, and the placement of topsoil and seed were completed in late October 2003.

In accordance with the Quality Assurance Project Plan, data validations were conducted on soil samples representing final verification locations.

Appendix A contains a copy of the Interim Measures Report that provides a comprehensive description of the 2003 IM activities, including the strategies and objectives developed as part of JCI's corrective action program for the site, the areas and scopes of IM excavation efforts, and the results of soil remediation verification sampling and analyses.

3.2 EFFECTS RELATING TO SOIL

The 2003 IM removal of impacted soils from the site followed by the subsequent backfill with clean material eliminates the potential for direct contact with impacted materials in the areas of excavation. This result was immediately quantifiable at the conclusion of the IM based on analyses of the backfill material. Additionally, surface soils located outside of the IM excavation areas have been shown to meet direct contact criteria via extensive sampling and analyses, and for some inorganic constituents, the application of statistical demonstrations.

3.3 EFFECTS RELATING TO GROUNDWATER

The IMs removed silty/clayey soils that were present at or above the water table at the time of excavation and replaced them with clean sand. These activities primarily resulted in the beneficial removal of vadose zone and capillary fringe contaminant source materials. Inherently, aquifer matrix disturbances also occurred that likely facilitated the release and migration of residual saturated zone contaminants as dissolved phase constituents within the shallow groundwater. As a result, short-term concentrations of organic and inorganic groundwater constituents may increase. The act of replacing the removed silty/clayey soils with clean sand has: 1) increased the amount of direct infiltration of precipitation (recharge into the shallow water table), 2) increased the hydraulic conductivity of the upper-most aquifer matrix, resulting in a preferential flow path and potentially increasing groundwater flow velocities, and reducing the potential attenuation of contaminants impacting groundwater in this zone by replacing aquifer materials with lower organic carbon content sand backfill, 3) reduced the residence contact time of groundwater with impacted saturated zone soils that may remain beneath some portions of the excavation area, and 4) ultimately changed the overall steady state conditions for shallow groundwater across much of the site. Therefore, while short-term fluctuations in groundwater quality may occur, long-term contaminant concentration reductions will result from the IM efforts. Once steady-state aquifer conditions have been re-established, the need for additional or more aggressive corrective measures can be fully assessed. For planning purposes, it has been assumed that steady-state conditions within the shallow aquifer will be documented within one year of completing the IM activities.

3.4 EFFECTS RELATING TO SEDIMENTS

With the removal of impacted surface soils across the site, including upland and drainage ditch areas, the net flux of contaminant laden sediments to the Red Cedar River via overland sheet flow and channelized flow will likely be eliminated. Additionally, the effective removal of phase separated hydrocarbons (kerosene) from the SWMU C area has eliminated the migration of free phase kerosene to the river, and has also eliminated a significant source of the dissolved phase groundwater contamination that previously discharged to the river hyporheic zone.

4. SOIL CORRECTIVE MEASURES

4.1 INTERIM MEASURES COMPLETED

IMs have been implemented at the site that will have immediate and long-term effects on site surface and subsurface soil. As cited in Section 3.1, over 83,000 tons of impacted soil, including TSCA waste, listed waste, and inorganics-impacted soils were excavated and disposed off site. Excavations proceeded to the water table at approximately 95 percent of the total excavation area and encompassed all SWMUs at the site except for SWMUs A and G, which were previously remediated. Following completion of excavation activities for a particular area, confirmation sampling was completed to verify cleanup.

All excavation areas were backfilled using clean sand fill. The majority of the site was returned to previous grade to support property redevelopment. The northwestern part the site, between SWMU A and the Red Cedar River, is within the 100-year floodplain; it was returned to an elevation below pre-existing grade to increase the volume of the floodplain and provide an area for wetland-type habitat. After being returned to grade, all excavation areas were covered with a 6-inch lift of topsoil and seed. All excavations, backfilling, and the placement of topsoil and seed were completed in late October 2003.

4.2 SOIL CLEANUP OBJECTIVES

4.2.1 Human Health Risks

All potential exposure pathways between soil "contamination" and human receptors were further evaluated based on the current and future uses and zoning of land and groundwater at the FST site, a comparison of all acquired soil data to Part 201 cleanup criteria, and on the findings and conclusions presented in the CA 725. Several exposure pathways were never exceeded by any sample results, including any of the inhalation criteria established in Part 201. Some soil samples contained constituents at concentrations above Part 201 protection of drinking water and protection of GSI criteria. Those exposure pathways are appropriately addressed in the discussions regarding groundwater corrective actions presented in Section 5. The remaining exposure pathways to be considered are comprised of the various direct contact categories established in Part 201. CA 725 identified the following potential exposure pathways meriting further evaluation:

- Construction workers may be exposed to on-site contaminated surface soil;

- Trespassers may be exposed to on-site contaminated surface soil; and
- Construction workers may be exposed to contaminated subsurface soil during excavation activities.

Notably, all of these potential exposures were subsequently considered insignificant as per CA 725. Exposure of construction workers to on-site contaminated surface soil is not currently significant because such exposures are carefully controlled and limited by an existing health and safety program that all construction workers on-site follow. Trespassers are not likely to engage in activities such as excavation of soil that could result in significant exposure, nor are trespassers likely to remain long on-site or trespass only in areas where concentrations of chemicals in soil exceed criteria.

In addition, a statistical analysis was conducted on all of the direct contact exceedances documented from the 2003 soil sampling effort. As more fully documented in **Appendix C**, that analysis demonstrates that there are no direct contact risks under the industrial or commercial land use scenario.

4.2.2 Ecological Risks

The Site is located at the margin of the City's residential area and is surrounded by farmland and forested wetlands that provide much better habitat for wildlife than the site itself. Further north and south of the site, other commercial and residential properties are present. To the east, commercial properties are initially present with residential properties located beyond. The 14-acre site does not represent a significant amount of land habitat when compared to the surrounding area; therefore, the soils remaining on site do not pose a significant risk to the environment. In addition, the site is an industrial property that has not provided desirable wildlife habitat since its development in 1949. The completed IM effort has however, improved habitat by removing contamination and expanding the wetlands.

4.2.3 Criteria Selection

MDEQ Part 201 Industrial/Commercial II cleanup criteria were selected as target criteria for soil cleanup, in accordance with agreements reached during negotiation of the December 2002 AOC.

4.3 SOIL ALTERNATIVE SCREENING/EVALUATION

As discussed in Section 4.2, cleanup objectives for soils were met as a result of the 2003 IM. Therefore, the only soil corrective measure alternative screened for the FST site was institutional controls.

Institutional Controls

Institutional controls would consist of deed restrictions, local ordinances, and/or zoning that would limit the future use of the property such that the exposure pathways for direct contact would remain insignificant (i.e. maintaining the current commercial/industrial zoning). The cost for this alternative would be relatively low, and the schedule for construction and implementation would be quick (1 to 3 months).

4.4 PROPOSED CORRECTIVE MEASURES FOR SOIL

IMs completed during 2003 have effectively addressed all areas of the FST site that contained impacted soil above applicable Part 201 cleanup criteria. Direct contact and inhalation risks are not exceeded beyond acceptable levels (all Part 201 generic direct contact criteria exceedances were statistically eliminated). As further described in Section 5, while some soil samples contained constituents above Part 201 protection of drinking water and GSI criteria, appropriate controls will be implemented as part of the groundwater corrective action to effectively address those exposure pathways. Therefore, the proposed corrective measures for soil at the FST site consist of institutional controls.

Institutional controls would consist of a detailed review of existing local ordinances, deeds and current restrictions regarding the property to determine if exposure pathways for direct contact will remain insignificant (i.e., land use will remain commercial/industrial).

4.5 SOIL COST ESTIMATE

The following table lists estimated costs for the screened alternative for soil. Estimates may vary from -20% to +50% due to added mobilization, engineering, permitting and negotiation costs.

ALTERNATIVE	NOTES	ESTIMATED COST RANGE
Institutional Controls	Completion of closure documentation and public notifications will need to be addressed.	\$20,000 - \$50,000

4.6 SOIL SCHEDULE

The implementation schedule for proposed corrective measures for soil is presented below. It is anticipated that once institutional controls are in place to address the direct contact exposure pathway for soil, no further action will be required.

TIME PERIOD	ACTIVITY
Months 6 to 12	Review of any existing institutional controls governing the FST site. Public comment period on remedy selection and closure documentation.

5. GROUNDWATER CORRECTIVE MEASURES

5.1 INTERIM MEASURES COMPLETED

The IMs removed all of the known contaminant sources that were present in vadose zone and capillary fringe soils at the site. . All of the identifiable free product kerosene was also removed during the IMs. Therefore, long-term reductions in groundwater contaminant levels will occur. The act of replacing the excavated soils, which were largely low permeability, fine-grained silts and clays, will have a measured effect on short-term aquifer conditions. As more fully described in Section 3.3, the IM has ultimately changed the overall steady state conditions for shallow groundwater across much of the site. Therefore, while long-term contaminant concentration reductions will result from the IM efforts, short-term fluctuations in groundwater quality may occur.

5.2 GROUNDWATER CLEANUP OBJECTIVES

5.2.1 Human Health Risks

The only exposure pathway between groundwater "contamination" and human receptors that is potentially complete, based on the current use of land and groundwater, and on the findings and conclusions presented in the CA 725 and CA 750 prepared for the site, is groundwater contact exposure of construction workers in excavations at or below the water table. There are no groundwater exceedances for any inhalation criteria established in Part 201. While groundwater characterization results show that Part 201 drinking water and GSI criteria are exceeded, those pathways have been demonstrated to be incomplete for the current land (and groundwater) use of the FST site and surrounding properties.

5.2.2 Ecological Risks

The only potential exposure pathway for ecological receptors at the site is the discharge of contaminated groundwater to surface water at concentrations above risk-based ecological protection criteria. ETW presented GSI mixing zone calculations as part of the CA 750 submittal that evaluated the overall effects of the plume discharge on surface water quality. As presented therein, a mixing zone dilution factor of 325:1 is conservatively estimated, which results in worst-case surface water detections of vinyl chloride approximately 1 ug/L (vinyl chloride is the plume constituent present at the highest concentration compared to its respective Part 201 GSI criteria). As exemplified by this worst-case scenario, the groundwater plume on-site will not present a significant ecological risk to the Red Cedar River. Application of that dilution factor to all other GSI exceedances similarly results in trace or non-detect surface water concentrations well below ecological protection criteria.

5.2.3 Criteria Selection

Based on the risk factors described above, the applicable groundwater criteria requiring further application of corrective measures beyond institutional controls are the Part 201 GSI criteria. A MDEQ Mixing Zone Determination will be obtained to develop site-specific cleanup criteria. In addition, FAVs are applicable for the criteria selection per Michigan Rule 57 Surface Water Quality Values. Note that there are no FAV exceedances for any groundwater plume constituents at any FST monitoring well locations near the Red Cedar River.

5.3 GROUNDWATER ALTERNATIVE SCREENING EVALUATION

Groundwater corrective measure alternatives screened for the FST site that could be applicable as stand-alone remedies or in combination are:

Institutional Controls

Institutional controls would consist of deed restrictions, local ordinances, and/or zoning that would limit the future use of the property such that the exposure pathways for drinking water ingestion and groundwater direct contact would remain insignificant (i.e., prohibit the placement of potable or irrigation wells, and limit excavations below the water table and/or limit land uses to commercial and industrial development). The cost for this alternative would be relatively low, and the schedule for construction and implementation would be quick (1 to 3 months).

Monitored Natural Attenuation (MNA) and Mixing Zone Determination

MNA would consist of routine monitoring of the contaminant plume in accordance with an approved RCRA Groundwater Monitoring Program Plan (**Appendix E**). The MDEQ Mixing Zone Determination would establish the maximum allowable contaminant concentrations in groundwater at compliance well locations specified near the Red Cedar River. The cost for this alternative would be medium, and the schedule for construction and implementation would be for an extended period of time (12 to 36 months).

In-Situ Treatment

In-situ treatment includes but is not limited to the following:

- Injection or application of substrate and/or other compounds to alter geochemistry to enhance bioremediation of chemicals of concern (sparging, surface overlays, passive well placement, etc.);
- Injection or application of chemicals to provide destruction or inhibition of chemicals of concern (injection of oxidant/inhibiter, surface overlay of oxidant/inhibiter, etc.);
- Permeable reactive barriers;
- Electro-chemical barriers; and
- Bio-barriers.

The cost and schedule for these alternatives vary depending on the technology.

Ex-Situ Treatment

Ex-situ treatment includes but is not limited to the extraction and treatment/augmentation of impacted groundwater with re-injection or other discharge. The cost and schedule for this alternative varies depending on the treatment system and operating complexities, including water volumes, pretreatment and polishing requirements, permitting, testing, and reporting obligations.

5.4 PROPOSED CORRECTIVE MEASURES FOR GROUNDWATER

The final corrective measures alternative selected for groundwater for the FST site consists of a combination of institutional controls and deed restrictions (and/or local zoning ordinances), coupled with a monitoring program specifically designed to fully assess the long term effectiveness of the IM source removal activities completed during 2003. This approach is based on the current risk and land-use based assessment of groundwater conditions at the site, which demonstrates the current contaminant characteristics do not pose threats to ecological or human receptors. Notably, appropriate contingency measures are also incorporated into the final corrective measures program for groundwater, as part of a near-term safeguard against potential contaminant rebound effects sometimes observed in aquifers after site remediation activities are initially completed. These contingency measures are more fully described below.

Institutional Controls

A review of existing local ordinances, deeds, and current use restrictions regarding the FST property will be performed to develop a plan to ensure that site groundwater is not used for drinking water or irrigation purposes. If necessary, further restrictions will be placed on the property to restrict usage and limit access in order to control potential exposures.

Short and Long Term Groundwater Monitoring

A RCRA Groundwater Monitoring Program Plan (**Appendix E**) has been developed as part of the corrective action and monitoring program for the site to accomplish the following objectives:

Pursuant to 40 CFR 265.93(d)(7) and Part 201, the monitoring program should be capable of assessing the site's impact on the quality of groundwater.

- The short-term objective of the monitoring program will be to establish a new baseline of groundwater flow and contaminant conditions following the 2003 IM excavation, which removed overlying contaminant sources and disturbed the steady-state aquifer conditions.
- The long-term objective of the monitoring program will be to assess the concentration and migration rate of hazardous constituents in the groundwater on a regular basis until final closure of the site.
- Per 40 CFR 265.91, the groundwater monitoring system will be capable of yielding groundwater samples for analysis and will consist of at least one monitoring well installed hydraulically upgradient from the waste management area(s), and at least three monitoring wells installed hydraulically downgradient at the limits of the waste management area(s).
- Due to the additional groundwater monitoring demonstrations required as part of the MDEQ Mixing Zone Determination, several additional monitoring well nests will be included in the overall monitoring system.

- As more fully described in the Groundwater Monitoring Program Plan, selected monitoring well samples will be analyzed for VOCs, Michigan 10 metals plus nickel and hexavalent chromium, and cyanide. In addition, MNA parameters will also be analyzed, as described below.

MNA and Mixing Zone Determination

Based on the current groundwater quality and flow conditions observed at the site, MNA in conjunction with a MDEQ Mixing Zone Determination will be required. EPA and MDEQ MNA guidance documents were used to develop the MNA approach more fully described in the Groundwater Monitoring Program Plan in **Appendix** C. For the FST site, MNA assessments will be made on a regular basis as part of the short- and long-term groundwater monitoring program. These assessments will aid in the determination of ongoing VOC breakdown processes already taking place within the shallow and deep aquifers at the FST site, and will provide an indication of the effectiveness of the 2003 IM source removal activities. In addition, the acquired MNA data can be used as needed to assess potential fate and transport conditions on- and off-site as an added safeguard to the conservative, risk-based corrective measures program. Selected monitoring wells will be sampled for a variety of MNA parameters, including but not limited to:

- Oxidation-Reduction Potential (ORP)
- Sulfates/Sulfites
- Nitrates/Nitrites
- Ferrous/Ferric Iron
- Alkalinity
- Hardness
- Manganese
- Chemical Oxygen Demand (COD)
- Ethane and Ethene

A MDEQ Mixing Zone Determination Request will be completed and filed with the State of Michigan upon EPA approval of this FCMP. Based on groundwater and surface water flux calculations presented in the CA 750 submitted for this project, a conservative mixing zone dilution factor of 325:1 will effectively ensure that no ecological or human exposure risks are presented by the residual groundwater plume discharging to the Red Cedar River.

Points of Compliance

The selection of appropriate Points Of Compliance for site groundwater is based primarily on the most significant groundwater exposure pathway for site contaminants, the Red Cedar River. A variety of selection factors were evaluated to designate which monitoring wells represented optimal Points of Compliance, including hydrogeological conditions (i.e. groundwater flow parameters in the shallow and deep aquifers), groundwater contaminant distributions and current cleanup criteria comparisons, and most significantly, the consideration of mixing zone and GSI impacts. The Points of Compliance identified below will provide the necessary groundwater monitoring capabilities required to demonstrate short- and long-term attainment of corrective action objectives.

Shallow Monitoring Wells Designated as Points of Compliance *(from south to north along the river)*: MW-14, MW-B1, MW-17, MW-26, MW-24, MW-22, MW-21.

Deep Monitoring Wells Designated as Points of Compliance: *(from south to north along the river)*: MW-B2, MW-OS3C, MW-J2, MW-OS1C

Contingencies

Based on groundwater quality data collected on a regular basis during the short- and long-term monitoring program, contingency corrective measures will be implemented should the following "triggers" be observed and verified:

- A FAV for any site contaminant is exceeded in two consecutive monitoring events adjacent to the Red Cedar River.
- A seasonal exceedance of a FAV is determined over time.
- Detected concentrations of one or more site contaminants at a GSI compliance well exceed the mixing zone allowance for two consecutive monitoring events.
- A seasonal exceedance of one or more Mixing Zone Determination values (site-specific GSI criteria) is determined over time.

Contingency-based corrective measures will be implemented that include the following components:

- A general evaluation of the data collected to date;

- A human health and ecological risk screening of the data collected to date, with the "trigger" exceedances evaluated;
- If the risk screening indicates that a more thorough risk evaluation is required, and that acceptable results are achievable, then that risk assessment will be performed;
- Additional data collection efforts will be completed if they are required to complete the risk assessment;
- If risk assessment findings determine that the exceedance(s) are unacceptable, then targeted corrective measures focused on in-situ technologies will be designed and implemented per EPA and MDEQ approvals.

5.5 GROUNDWATER COST ESTIMATE

The following table lists estimated costs for the screened (and selected) alternatives for groundwater. Alternatives may be used alone or in combination with each other. Estimates may vary from -20% to +50% due to added mobilization, engineering, permitting and negotiation costs.

ALTERNATIVE	NOTES	ESTIMATED COST
Institutional Controls		\$20,000 - \$50,000
MNA and Mixing Zone Determination		\$40,000 - \$80,000 per year
In-Situ Treatment	Ozone sparging system	\$85,000 - \$200,000 (capital) \$40,000 - \$150,000 (O & M)
	Permeable Reactive Barrier wall	\$300,000 - \$2,000,000 (capital) \$40,000 - \$80,000 (monitoring)
	Bio-remediation	\$100,000 - \$400,000 (capital) \$30,000 - \$90,000 (O & M)
	Chemical oxidation	\$150,000 - \$800,000 (capital) \$30,000 - \$90,000 (O & M)
Ex-Situ Treatment	Pump and Treat	\$200,000 - \$2,000,000 (capital) \$100,000 - \$400,000 (O & M)

5.6 GROUNDWATER SCHEDULE

The construction and implementation schedule for the proposed corrective measures for groundwater is presented below. Note that the short-term groundwater monitoring program, along with the Mixing Zone Determination Request and implementation of institutional controls are included in the schedule. Long-term monitoring and potential contingencies are not shown, but if necessary, would occur after a one to two year groundwater monitoring period deemed necessary to fully evaluate the long-term beneficial effects of the completed IMs.

TIME PERIOD	ACTIVITY
Months 1 to 12	Collection of groundwater data on a semi-annual basis per the Groundwater Monitoring Program Plan for determination of steady-state groundwater conditions and the continuing evaluation of data as it is received. Submit Mixing Zone Determination Request to MDEQ. Implement institutional controls after the review of existing property designations.
Months 13+	Continue monitoring program and evaluate contingency triggers on an ongoing basis.
Month 13+	Final Remedy Construction Completion Report submitted describing the implemented groundwater corrective measures and summarizing the beneficial effects of protecting human health and the environment.

6. SEDIMENT CORRECTIVE MEASURES

6.1 INTERIM MEASURES COMPLETED

Both the North Ditch and the South Ditch, which drain into the Red Cedar River, were excavated and backfilled with clean fill material. With the removal of impacted drainage ditch sediments, the net flux of contaminant-laden sediments to the Red Cedar River via channelized flow has likely been eliminated. Similarly, the extensive IM excavation effort eliminated the potential for impacted site-wide surface soils to erode and migrate to the river.

6.2 SEDIMENT CLEANUP OBJECTIVES

6.2.1 Human Health and Ecological Risks

As summarized in Section 2.3 and **Appendix C**, the sediments in the Red Cedar River do not pose an unacceptable risk to human health. The only potentially complete pathway is the exposure of aquatic life to sediments (via direct contact and ingestion) when site data are compared to ecological screening levels (PECs and TECs) on a point-by-point basis. When SWAC values are used for comparison, no exceedances of PECs occur. Site-specific cleanup levels have not been determined for this pathway, and the site data have been compared to ecological screening levels only.

6.2.2 Criteria Selection

Part 201 administrative rules (Rule 299.5730) specify that site-specific cleanup criteria are to be based on sound scientific principles and evaluation of bulk sediment chemistry, sediment toxicity, and benthic community populations. The TECs and PECs described in Section 2.3 provide for a screening evaluation of sediment toxicity to the benthic community. These criteria are <u>not</u> based on site specific testing, such as toxicity testing or biological surveys. In addition to these screening criteria, Part 201 presents the following other considerations for sediment evaluations, which are listed below:

- Restrictions on fish or wildlife consumption;
- Tainting of fish and wildlife flavor;
- Degraded fish or wildlife populations;
- Fish tumors or other deformities;

- Bird or animal deformities or reproductive problems;
- Degradation of benthos;
- Restriction on dredging activities;
- Eutrophication or undesirable algae;
- Restriction on drinking water consumption or taste or odor problems;
- Beach closings;
- Degradation of aesthetics;
- Added costs to agriculture, industry or a local unit of government;
- Degradation of phytoplankton or zooplankton populations;
- Loss of fish and wildlife habitat;
- Unacceptable risk through human contact as a result of absorption of hazardous substances through the skin or by incidental ingestion of sediments; and
- Other unacceptable risks to human receptors exposed to hazardous substances in sediments.

Some of these considerations have already been evaluated in the Sediment Technical Memorandum (**Appendix C**), and some will require further sediment investigation. For sediment cleanup, site-specific cleanup criteria will be established after additional sediment toxicity tests and benthic macro-invertebrate studies are conducted. After this additional data is collected, it will be evaluated against the Part 201 sediment evaluation "other considerations", and final cleanup criteria will be finalized.

6.3 SEDIMENT ALTERNATIVE SCREENING EVALUATION

Sediment corrective measure alternatives screened for the FST site that could be applicable as stand-alone remedies or in combination are listed below. However, cleanup criteria for sediments have not been determined, and in Michigan, are established by the MDEQ on a site-specific basis. Although the extensive sediment analytical data set gathered during 2003 indicates that the Red Cedar River sediment impacts are slight, further sediment sampling will be conducted to support a risk assessment and finalize cleanup criteria. Acquired data would also be used to evaluate the "other considerations" as required by Part 201.

Dredging

Dredging would consist of the removal of impacted sediment with subsequent disposal and/or placement outside of the aquatic environment if concentrations are below the direct contact values and proper controls are used to ensure the material does not return to the aquatic environment. The cost for this alternative would be medium to high, and the schedule for construction and implementation would be medium (4 to 8 months).

Institutional Controls

Institutional controls consist of the deeding and maintenance of existing riparian buffer strips sufficient to reduce the in-flux of contaminated soils into the aquatic environment. This option would be used in combination with other options. The cost for this alternative would be relatively low, and the schedule for implementation would be quick (1 to 3 months).

Encapsulation

Encapsulation consists of the trapping of the sediment within a solid matrix from which leaching or exposure is no longer possible or results in a reduced level that meets the criteria. This may include injection and capping with hydraulic cement or some other method. The cost for this alternative would be medium to high, and the schedule for construction and implementation would be medium (4 to 8 months).

Monitored Natural Recovery (MNR)

MNR consists of periodic monitoring of the natural stream depositional environment. This measure takes into account the natural in-flux of clean materials upstream that will mix with and redistribute contaminant concentrations to levels that are acceptable over time. The cost for this alternative would be medium, and the schedule for construction and implementation would be for an extended period of time (12 to 36 months).

Hydraulic Modifications

Hydraulic Modifications would consist of sediment trapping and or re-routing the stream channel. In the case of sediment trapping, an elevation would be set at the downstream side of the area of concern, which will tend to pond the water upstream of it. This establishes a depositional environment that prevents or minimizes the chance of re-suspension of impacted sediments and transport downstream, and increases the rate of clean sediment deposition above the existing sediments, thus isolating it from the environment. Stream re-routing would consist of the establishment of a new reinforced bank stream channel in the current floodplain, which bypasses the existing sediment, thus removing it from the aquatic environment. The material removed to create the new channel could subsequently be used to backfill the old channel, and would act as a cap. The cost for this alternative would be medium to high, and the schedule for construction and implementation would be medium (6 to 12 months).

6.4 PROPOSED CORRECTIVE MEASURES FOR SEDIMENT

The final corrective measures alternative selected for sediment consists of establishing site-specific cleanup levels expected to verify that there are no unacceptable ecological impacts in the river sediments. A comparison of historical and newly acquired data to the site-specific levels is expected to confirm the findings to date, (i.e., that observed impacts in the river sediment are minimal and will not require additional corrective action to protect ecological receptors).

6.5 SEDIMENT COST ESTIMATE

The following table lists estimated costs for the screened alternatives for sediment. Alternatives may be used alone or in combination with each other. Estimates may vary from -20% to +50% due to added mobilization, engineering, permitting and negotiation costs.

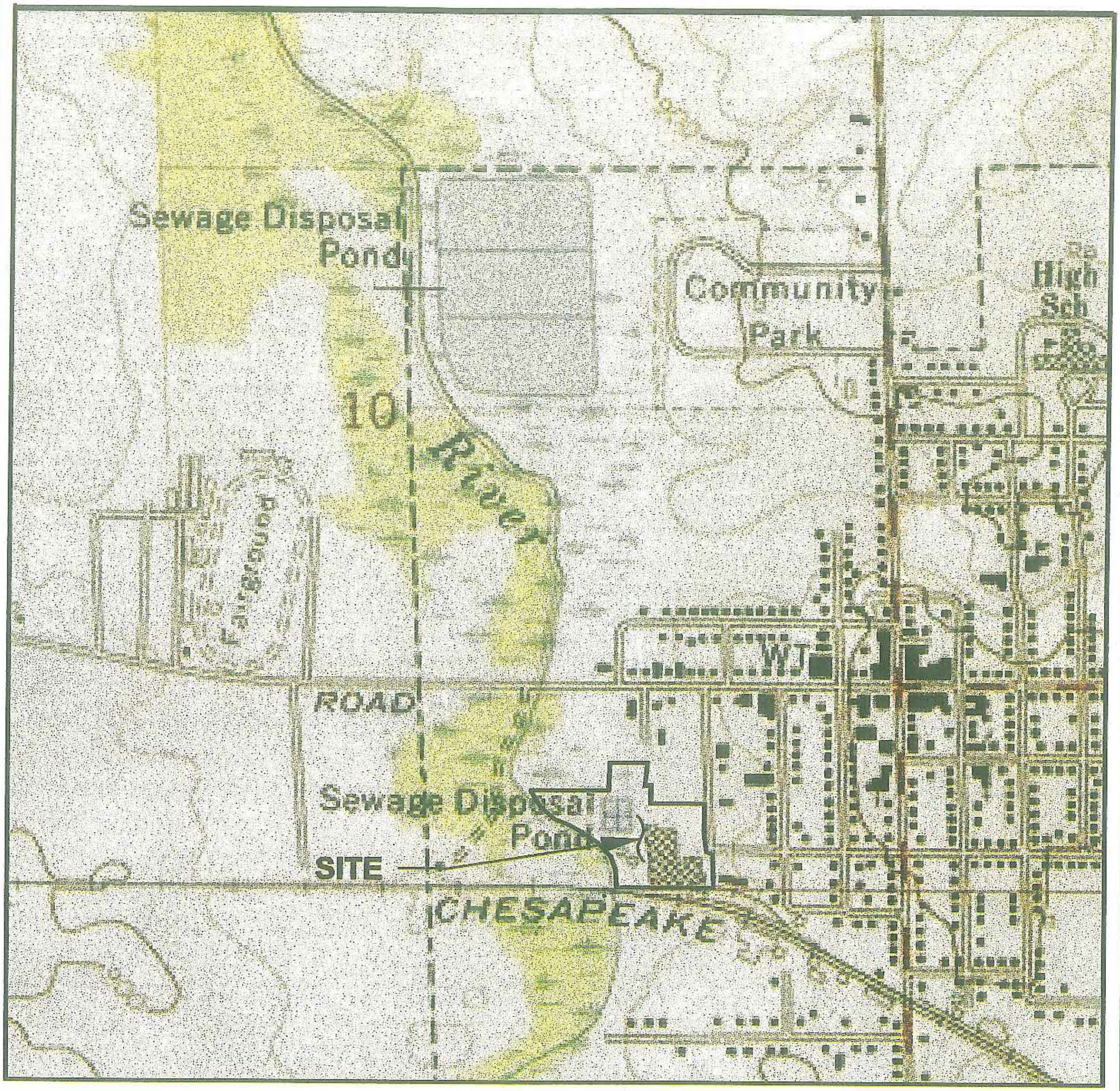
ALTERNATIVE	NOTES	ESTIMATED COST RANGE
Dredging (wet/dry)	Spot dredging or full area.	\$200,000 - \$2,000,000
Institutional Controls		\$20,000 - \$100,000
Encapsulation		\$300,000 - \$1,000,000
Monitored Natural Recovery (MNR)		\$20,000 - \$100,000 per year
Hydraulic Modifications		\$200,000 - \$2,000,000

6.6 SEDIMENT SCHEDULE

The following schedule outlines activities to establish site-specific cleanup objectives, identify areas of ecological impact, and select an appropriate corrective measure.

TIME PERIOD	ACTIVITY
Months 1 to 6	Development of EPA and MDEQ approved Work Plan in order to address any nature and extent deficiencies and establish site-specific cleanup criteria.
Months 6 to 9	Implementation of Sediment Work Plan – gathering sediment toxicity test and benthic macro-invertebrate test data and subsequent data evaluation.
Months 9 to 12	Establishment of final cleanup criteria and determination of areas of ecological impact.
Months 13+	Selection and implementation of additional remedy, if required.
Months 13+	Final Remedy Construction Completion Report submitted describing the implemented sediment corrective measures and summarizing the beneficial effects of protecting human health and the environment.

FIGURES



SOURCE:

TOPO MAP FROM "MICHIGAN.TPO AND "UNTITLED.TPG DATED 10/01/03

WESTON SOLUTIONS

APPROXIMATE SCALE: 1" = 1000'

EARTH TECH

FIGURE 1
SITE LOCATION MAP

JOHNSON CONTROLS
FOWLERVILLE, MICHIGAN

NOVEMBER 2003

65468

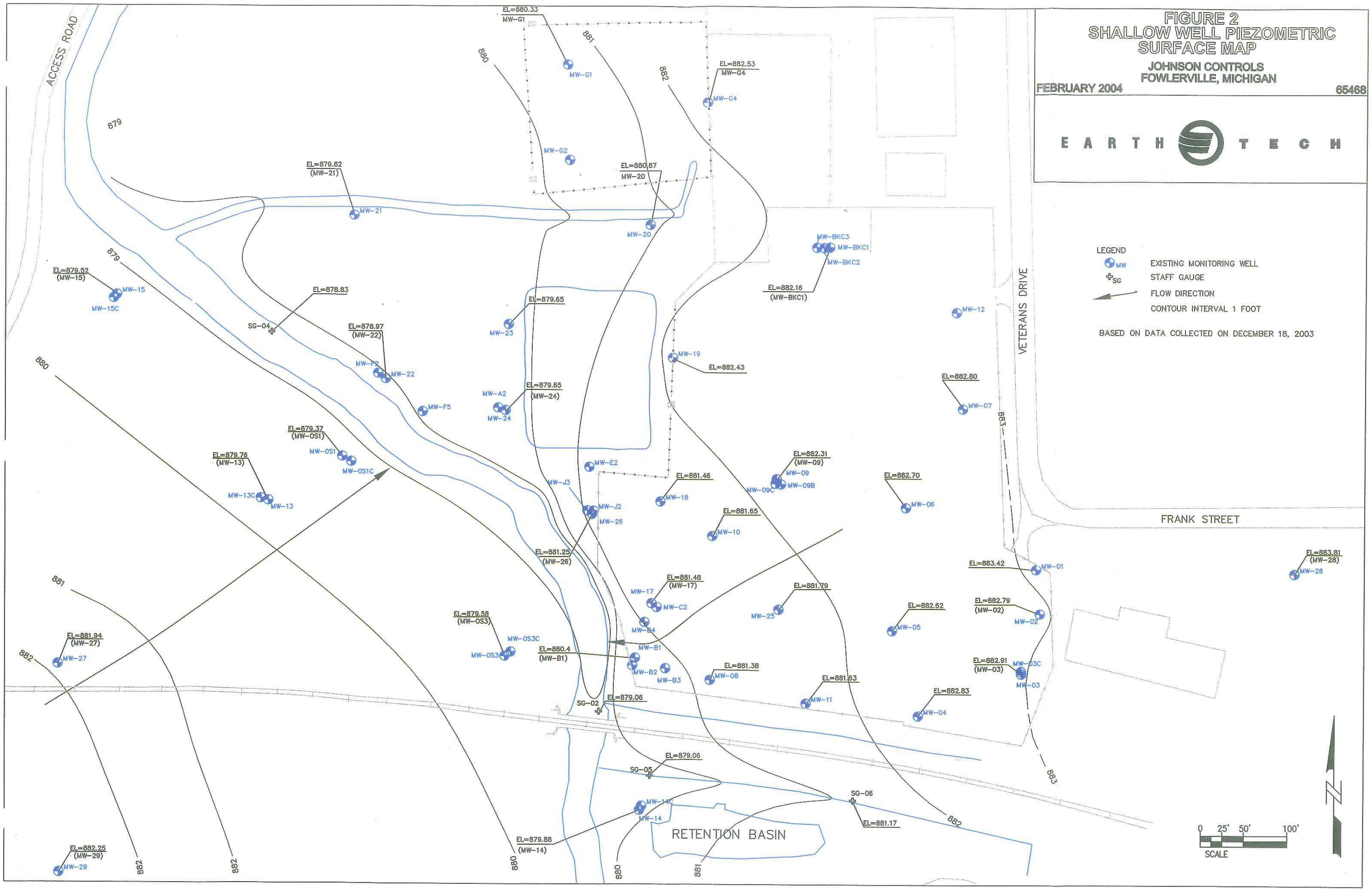


FIGURE 2
SHALLOW WELL PIEZOMETRIC SURFACE MAP
JOHNSON CONTROLS
FOWLERVILLE, MICHIGAN
FEBRUARY 2004
65468
EARTH TECH
LEGEND
MW EXISTING MONITORING WELL
SG STAFF GAUGE
FLOW DIRECTION
CONTOUR INTERVAL 1 FOOT
BASED ON DATA COLLECTED ON DECEMBER 18, 2003
ACCESS ROAD
VETERANS DRIVE
FRANK STREET
RETENTION BASIN
0 25' 50' 100'
SCALE
EL=880.33
MW-G1
EL=882.53
MW-G4
MW-G2
EL=880.87
MW-20
EL=879.82
(MW-21)
MW-21
MW-BKC3
MW-BKC1
MW-BKC2
EL=882.16
(MW-BKC1)
EL=879.52
(MW-15)
MW-15
MW-15C
EL=878.83
SG-04
EL=879.65
MW-23
EL=878.97
(MW-22)
MW-F2
MW-22
MW-F5
MW-12
MW-19
EL=882.43
EL=879.65
(MW-24)
MW-A2
MW-24
EL=882.80
MW-07
EL=879.37
(MW-0S1)
MW-0S1
MW-0S1C
EL=879.76
(MW-13)
MW-13C
MW-13
MW-E2
MW-J3
EL=881.46
MW-18
EL=882.31
(MW-09)
MW-09
MW-09C
MW-09B
EL=882.70
MW-06
MW-J2
MW-26
EL=881.65
MW-10
EL=881.25
(MW-26)
EL=883.42
MW-01
EL=883.81
(MW-28)
MW-28
EL=881.48
(MW-17)
MW-17
MW-C2
EL=881.79
MW-25
EL=882.62
MW-05
EL=882.79
(MW-02)
MW-02
MW-B4
EL=879.58
(MW-0S3)
MW-0S3C
MW-0S3
EL=880.4
(MW-B1)
MW-B1
MW-B2
MW-B3
EL=881.38
MW-08
EL=882.91
(MW-03)
MW-03C
MW-03
EL=881.63
MW-11
EL=882.83
MW-04
EL=881.94
(MW-27)
MW-27
SG-02
EL=879.06
EL=879.06
SG-05
SG-06
EL=881.17
MW-14C
MW-14
EL=879.88
(MW-14)
EL=882.25
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MW-29
879
880
881
882
883
N

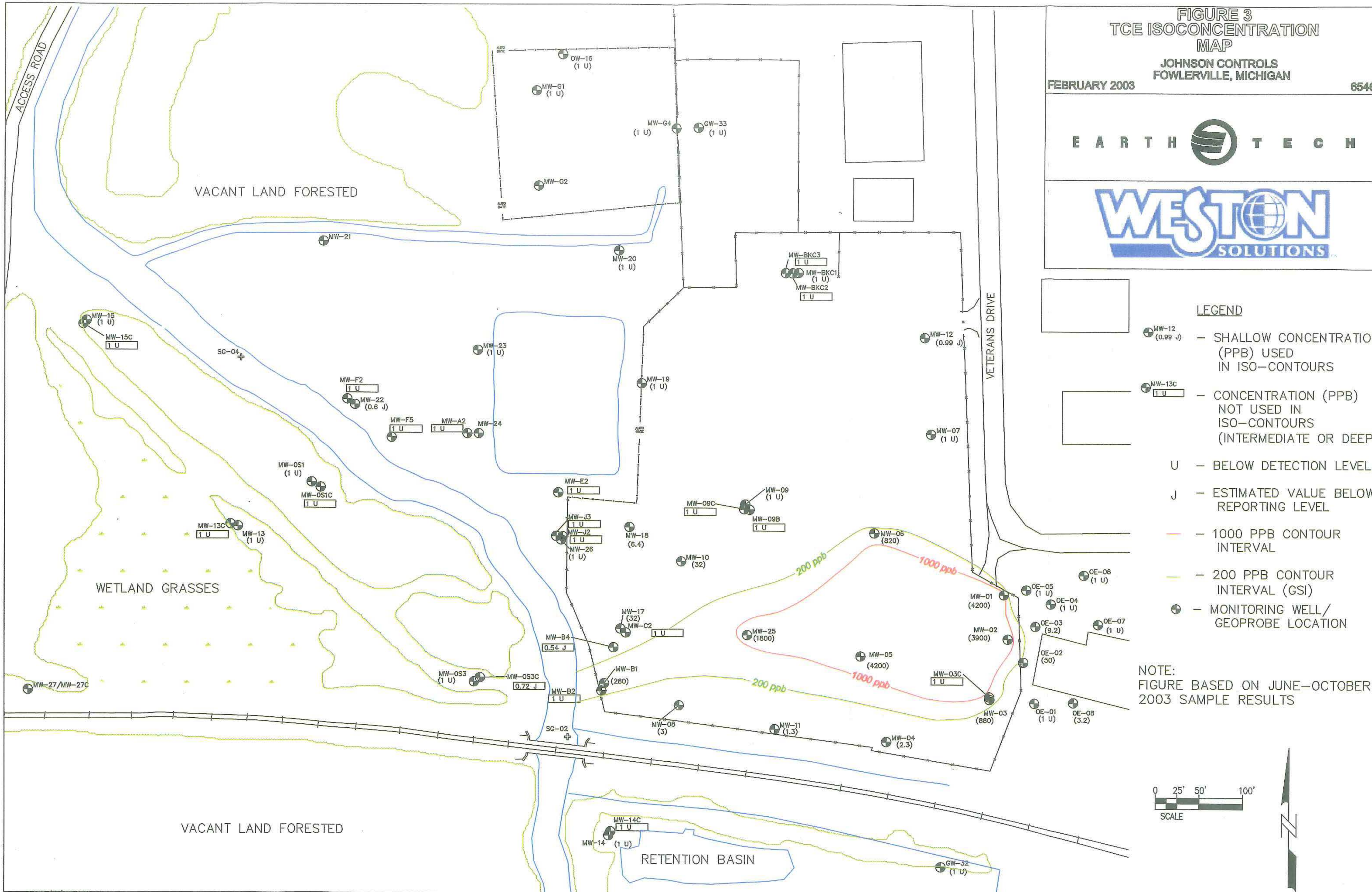
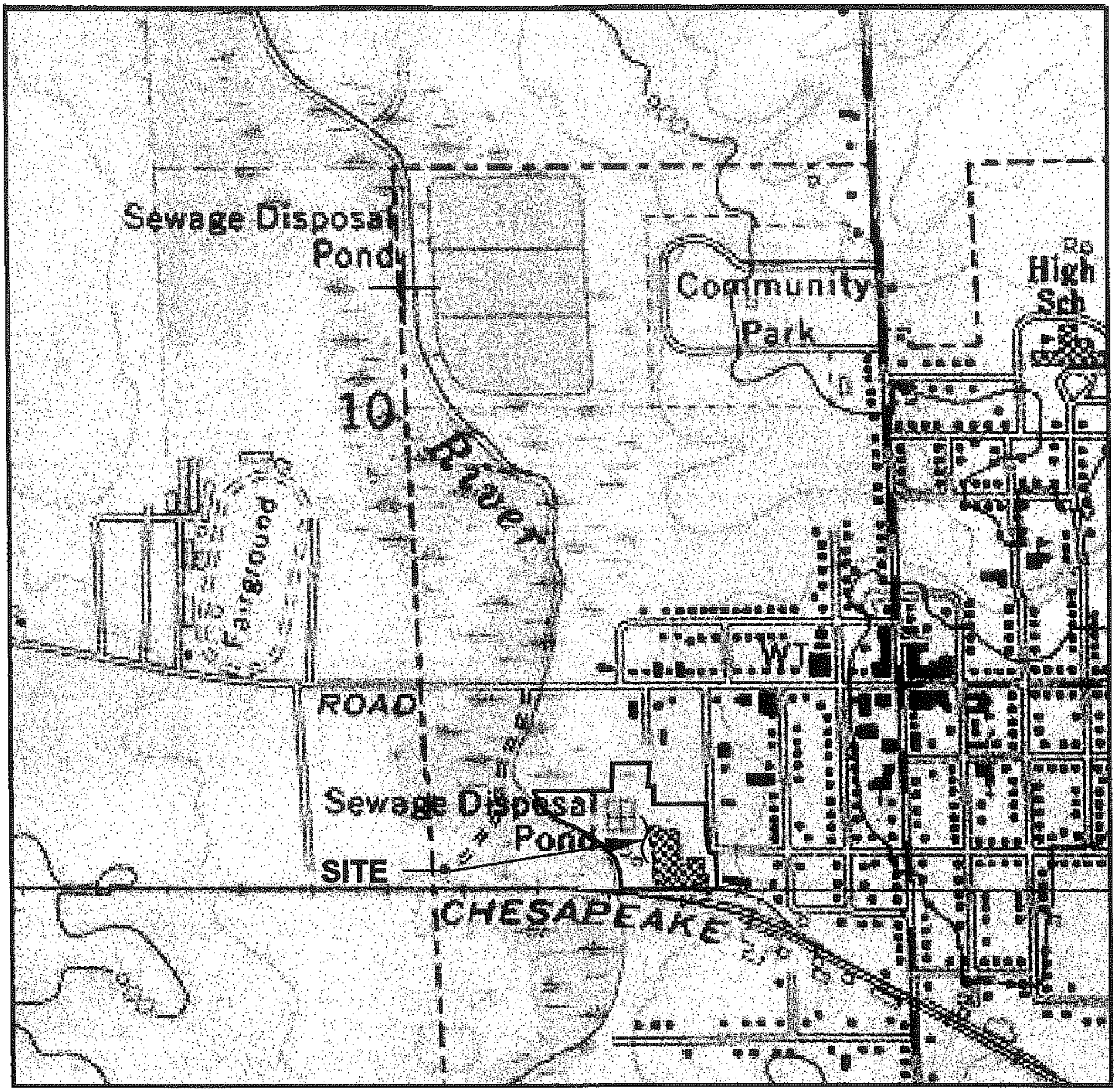


FIGURE 3
TCE ISOCONCENTRATION MAP
JOHNSON CONTROLS
FOWLERVILLE, MICHIGAN
FEBRUARY 2003
65468
EARTH TECH
WESTON SOLUTIONS
LEGEND
MW-12 (0.99 J) – SHALLOW CONCENTRATION (PPB) USED IN ISO-CONTOURS
MW-13C 1 U – CONCENTRATION (PPB) NOT USED IN ISO-CONTOURS (INTERMEDIATE OR DEEP)
U – BELOW DETECTION LEVEL
J – ESTIMATED VALUE BELOW REPORTING LEVEL
– 1000 PPB CONTOUR INTERVAL
– 200 PPB CONTOUR INTERVAL (GSI)
– MONITORING WELL/ GEOPROBE LOCATION
NOTE:
FIGURE BASED ON JUNE-OCTOBER 2003 SAMPLE RESULTS
0 25' 50' 100'
SCALE
N
ACCESS ROAD
VACANT LAND FORESTED
WETLAND GRASSES
VETERANS DRIVE
RETENTION BASIN
VACANT LAND FORESTED
200 ppb
1000 ppb
1000 ppb
200 ppb
OW-16 (1 U)
MW-G1 (1 U)
MW-G4 (1 U)
GW-33 (1 U)
MW-G2
MW-21
MW-20 (1 U)
MW-BKC3 1 U
MW-BKC1 (1 U)
MW-BKC2 1 U
MW-15 (1 U)
MW-15C 1 U
SG-04
MW-23 (1 U)
MW-19 (1 U)
MW-12 (0.99 J)
MW-F2 1 U
MW-22 (0.6 J)
MW-F5 1 U
MW-A2 1 U
MW-24
MW-07 (1 U)
MW-0S1 (1 U)
MW-0S1C 1 U
MW-E2 1 U
MW-09 (1 U)
MW-09C 1 U
MW-09B 1 U
MW-13C 1 U
MW-13 (1 U)
MW-J3 1 U
MW-J2 1 U
MW-26 (1 U)
MW-18 (6.4)
MW-06 (820)
MW-10 (32)
OE-06 (1 U)
OE-05 (1 U)
OE-04 (1 U)
MW-01 (4200)
MW-17 (32)
MW-C2 1 U
MW-25 (1800)
MW-02 (3900)
OE-03 (9.2)
OE-07 (1 U)
MW-B4 0.54 J
OE-02 (50)
MW-05 (4200)
MW-B1 (280)
MW-03C 1 U
MW-0S3 (1 U)
MW-0S3C 0.72 J
MW-27/MW-27C
MW-B2 1 U
MW-03 (880)
OE-01 (1 U)
OE-08 (3.2)
SG-02
MW-08 (3)
MW-11 (1.3)
MW-04 (2.3)
MW-14C 1 U
MW-14 (1 U)
GW-32 (1 U)
MW-29/MW-29C



SOURCE:

TOPO MAP FROM "MICHIGAN.TPO AND "UNTITLED.TPG DATED 10/01/03

WESTON SOLUTIONS

EARTH TECH

APPROXIMATE SCALE: 1" = 1000'

FIGURE 1
SITE LOCATION MAP

JOHNSON CONTROLS
FOWLERVILLE, MICHIGAN

NOVEMBER 2003

65468

A

APPENDIX A
2003 ADMINISTRATIVE ORDER ON CONSENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:	RECEIVED REGIONAL)	ADMINISTRATIVE ORDER ON CONSENT
	)	
Johnson Controls, Inc.	)	U.S. EPA Docket No: RCRA-05- 2003-0004
425 Frank Street	'02 DEC 30) P3:35	
Fowlerville, Michigan	)	
	)	
EPA ID#: MID099124299	)	Proceeding under Section 3008(h) of the Resource Conservation and Recovery Act, as amended, 42 U.S.C. § 6928(h).
RESPONDENT.	)	

I. JURISDICTION

1. The Administrator of the United States Environmental Protection Agency (" EPA") is issuing this Administrative Order on Consent ("Order") to Johnson Controls, Inc. under Section 3008(h) of the Solid Waste Disposal Act, commonly referred to as the Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. §6928(h). The Administrator has delegated the authority to issue orders under Section 3008(h) of RCRA to the Chief, Enforcement and Compliance Assurance Branch; Waste, Pesticides and Toxics Division; EPA Region 5.

2. Johnson Controls, Inc. owns a former manufacturing facility at 425 Frank Street, Fowlerville, Michigan (the "facility"). The facility consists of approximately 11.5 acres of land on the southwest edge of Fowlerville, just east of the Red Cedar River. The facility fabricated, finished and plated zinc die castings until 1980, when Hoover Universal, Inc., currently a wholly-owned subsidiary of Johnson Controls, Inc., sold the facility to The Stanley Works ("Stanley"). Stanley owned and operated it until the end of 1985 and continued ownership until 1996, when Johnson Controls, Inc. assumed control of the facility.

3. Johnson Controls, Inc. agrees not to contest EPA's jurisdiction to issue this Order, to enforce its terms, or to impose sanctions for violations of the Order.

4. Johnson Controls, Inc. waives any rights to request a hearing on this matter pursuant to Section 3008(b) of RCRA and 40 C.F.R. Part 24, and consents to the issuance of this Order without a hearing under Section 3008(b) of RCRA as a Consent Order issued pursuant to Section 3008(h) of RCRA.

II. DEFINITIONS

5. This Order incorporates the definitions in RCRA, 42 U.S.C. §§ 6901 - 6922k, and the regulations promulgated under RCRA unless otherwise specified.

III. PARTIES BOUND

6. This Order applies to and binds EPA, Johnson Controls, Inc. and its agents, successors, assigns, trustees, receivers, and all persons, including but not limited to contractors and consultants, acting on behalf of Johnson Controls, Inc. Johnson Controls, Inc. will be responsible for and liable for any violations of this Order, regardless of Johnson Controls, Inc.'s use of employees, agents, contractors, or consultants to perform work required by this Order.

7. No change in ownership or corporate or partnership status relating to the facility will alter Johnson Controls, Inc.'s obligations under this Order. Any conveyance of title, easement, or other interest in the facility, or a portion of the facility, will not affect Johnson Controls, Inc.'s obligations under this Order. Johnson Controls, Inc. will give written notice of this Order to any successor in interest prior to transferring ownership or operation of the facility or a portion thereof and will notify EPA in writing within five days of the transfer. This written notice will describe how Johnson Controls, Inc. has assured that, despite the transfer, all institutional controls required now or in the future for the facility will be implemented and maintained. This paragraph will not apply if EPA and Johnson Controls, Inc. agree and confirm in writing that this Order has terminated as to the facility or any relevant portion of the facility.

IV. DETERMINATIONS

8. After consideration of the Administrative Record, the Chief, Enforcement and Compliance Assurance Branch; Waste, Pesticides and Toxics Division; EPA Region 5 has made the following conclusions of law and determinations:

a. Johnson Controls, Inc. is a "person" within the meaning of Section 1004(15) of RCRA.

b. Johnson Controls, Inc. is the current owner of a facility that has operated under interim status subject to Section 3005(e) of RCRA.

c. Certain wastes and constituents found at the facility are hazardous wastes and/or hazardous constituents pursuant to Section 1004(5), 3001 of RCRA and 40 C.F.R. Part 261.

d. There is or has been a release of hazardous wastes or hazardous constituents into the environment from the facility.

e. The actions required by this Order are necessary to protect human health or the environment.

V. PROJECT MANAGER

9. EPA and Johnson Controls, Inc. must each designate a Project Manager and notify each other in writing of the Project Manager selected within 14 days of the effective date of this Order. Each Project Manager will be responsible for overseeing the implementation of this Project. The parties must provide prompt written notice whenever they change Project Managers.

VI. WORK TO BE PERFORMED

10. Pursuant to Section 3008(h) of RCRA, Johnson Controls, Inc. agrees to and is hereby ordered to perform the actions specified in this section, in the manner and by the dates specified here. Johnson Controls, Inc. represents that it has the technical and financial ability to carry out corrective action at the facility. Johnson Controls, Inc. must perform the work undertaken pursuant to this Order in compliance with RCRA and other applicable federal and state laws and their implementing regulations, and consistent with all relevant EPA guidance documents as appropriate to the facility. This guidance includes, but is not limited to, the Documentation of Environmental Indicator Determination Guidance, and relevant portions of the Model Scopes of Work for RCRA Corrective Action and of EPA's risk assessment guidance.

11. Johnson Controls, Inc. must identify and define the nature and extent of releases of hazardous waste and hazardous constituents at or from the facility. This includes:

a. Completing an investigation to identify the nature and extent of any releases of hazardous waste and/or hazardous constituents at or from the facility which may pose an unacceptable risk to human health and the environment, and providing a report to EPA. The report must also describe the nature and extent of any releases of hazardous waste and hazardous constituents at or from the facility which do not pose an unacceptable risk to human health and the environment, and provide the basis for those conclusions, including an evaluation of the risks. Johnson Controls, Inc. may prepare and submit the report in two phases to provide timely support for the demonstrations described in paragraph 13, below, and for the determinations and proposal described in paragraph 15, below.

12. Johnson Controls, Inc. may proceed with remedial actions to limit site investigation or risk assessment activities to complete the work as defined in paragraphs 13 through 15, below.

13. Johnson Controls, Inc. must demonstrate by February 15, 2004, through submitting a final Environmental Indicators Report and by performing any other necessary activities, consistent with this Section, that:

a. All current human exposures to contamination at or from the facility are under control. That is, significant or unacceptable exposures do not exist for all media known or reasonably suspected to be contaminated with hazardous wastes or hazardous constituents above risk-based levels, for which there are complete pathways between contamination and human receptors.

b. Migration of contaminated groundwater at or from the facility is stabilized. That is, the migration of all groundwater known or reasonably suspected to be contaminated with hazardous wastes or hazardous constituents above acceptable levels is stabilized to remain within any existing areas of contamination as defined by monitoring locations designated at the time of the demonstration. In addition, any discharge of groundwater to surface water is either insignificant or currently acceptable according to an appropriate interim assessment. Johnson Controls, Inc. must collect monitoring and measurement data in the future as necessary to verify that migration of any contaminated groundwater is stabilized.

Johnson Controls may submit for EPA's review and comment a draft of the Environmental Indicators Report, provided such draft is submitted by November 15, 2003.

14. To prepare for and provide the demonstrations required by paragraph 13, above, Johnson Controls, Inc. must:

a. Determine appropriate risk screening criteria under current use scenarios and provide the basis and justification for the use of these criteria.

b. Determine any current unacceptable risks to human health and the environment and describe why other identified risks are acceptable.

c. Control any unacceptable current human exposures that Johnson Controls, Inc. identifies. This includes performing any corrective actions or other response measures ("corrective measures") necessary to control current human exposures to contamination to within acceptable risk levels.

d. Stabilize the migration of contaminated groundwater. This includes implementing any corrective measures necessary to stabilize the migration of contaminated groundwater.

e. Conduct groundwater monitoring to confirm that any contaminated groundwater remains within the original area of contamination.

f. Prepare a report, either prior to or as part of the final Environmental Indicators Report, that describes and justifies any interim actions performed to meet the requirements of this Section, including sampling documentation, construction completion documentation and/or confirmatory sampling results.

15. Johnson Controls, Inc. must propose to EPA by February 15, 2004, final corrective measures necessary to protect human health and the environment from all current and future unacceptable risks due to releases of hazardous waste or hazardous constituents at or from the facility (the "Final Corrective Measures Proposal"). The proposal must describe all corrective measures implemented at the facility since the effective date of this Order. It must also include a description of all other final corrective measures that Johnson Controls, Inc. evaluated, a detailed explanation of why Johnson Controls, Inc. preferred the proposed final corrective measures, and cost estimates for the final corrective measures evaluated. The proposal must also include a detailed schedule to construct and implement the final corrective measures, and to submit a Final Remedy Construction Completion Report. Johnson Controls, Inc. must complete as much of the initial construction work as practicable within one year after EPA selects the final corrective measures. Johnson Controls, Inc. must complete all final corrective measures within a reasonable period of time to protect human health and the environment.

16. As part of developing its proposal, Johnson Controls, Inc. must propose appropriate risk screening criteria, cleanup objectives, and points of compliance under current and reasonably expected future land use scenarios and provide the basis and justification for these decisions.

17. EPA may request supplemental information from Johnson Controls, Inc. if EPA determines that the proposal and supporting information do not provide an adequate basis to select final corrective measures that will protect human health and the environment from the release of hazardous waste and hazardous constituents at or from the facility. Johnson Controls, Inc. must provide timely any supplemental information that EPA requests in writing.

18. EPA will provide the public with an opportunity to review and comment on its proposed final corrective measures, including a detailed description and justification for the proposal (the "Statement of Basis"). Following the public comment period, EPA will select the final corrective measures, and will notify the public of the decision and rationale in a "Final Decision and Response to Comments" ("Final Decision").

19. Upon notice by EPA, Johnson Controls, Inc. must implement the final corrective measures selected in EPA's Final Decision according to the schedule in the Final Decision.

20. Reporting and other requirements:

a. Johnson Controls, Inc. must establish a publicly accessible repository for information regarding site activities and conduct public outreach and involvement activities.

b. Johnson Controls, Inc. must provide quarterly progress reports to EPA by the fifteenth day of the month after the end of each quarter. The report must list work performed to date, data collected, problems encountered, project schedule, and percent project completed.

c. The parties will communicate frequently and in good faith to assure successful completion of the requirements of this Order, and will meet on at least a semi-annual basis to discuss the work proposed and performed under this Order.

d. Johnson Controls, Inc. must provide a Final Remedy Construction Completion Report documenting all work that it has performed pursuant to the schedule in EPA's Final Decision.

e. If ongoing monitoring or operation and maintenance is required after construction of the final corrective measures, Johnson Controls, Inc. must include an operations and maintenance plan in the Final Remedy Construction Completion Report. Johnson Controls, Inc. must revise and resubmit the report in response to EPA's written comments, if any, by the dates EPA specifies. Upon EPA's written approval, Johnson Controls, Inc. must implement the approved operation and maintenance plan according to the schedule and terms of the plan.

f. Any risk assessments Johnson Controls, Inc. conducts must estimate human health and ecological risk under reasonable maximum exposure for both current and reasonably expected future land use scenarios. In conducting the risk assessments, Johnson Controls, Inc. will follow the Risk Assessment Guidance for Superfund (RAGS) or other appropriate EPA guidance. Johnson Controls, Inc. will use appropriate, conservative screening values when screening to determine whether further investigation is required. Appropriate screening values include those derived from Federal Maximum Contaminant Levels, EPA Region 9 Preliminary Remediation Goals, EPA Region 5 Ecological Screening Levels, EPA Region 5 Risk Based Screening Levels, or RAGS.

g. All sampling and analysis conducted under this Order must be performed in accordance with the Region 5 RCRA Quality Assurance Project Plan Policy (April 1998) as appropriate for the site, and be sufficient to identify and characterize the nature and extent of all releases as required by this Order. EPA may audit laboratories Johnson Controls, Inc. selects or require Johnson Controls, Inc. to purchase and have analyzed any performance evaluation samples selected by EPA which are compounds of concern. Johnson Controls, Inc. must notify EPA in writing at least 14 days before beginning each separate phase of field work performed under this Order. At the request of EPA, Johnson Controls, Inc. will provide or allow EPA or its authorized representative to take split or duplicate samples of all samples Johnson Controls, Inc. collects under this Order.

21. Project Managers can agree in writing to extend, for 90 days or less, any deadline in this Section. However, extensions of greater than 90 days require obtaining approval from the Chief of the Enforcement and Compliance Assurance Branch; Waste, Pesticides and Toxics

Division.

VII. ACCESS

22. Upon reasonable notice, and at reasonable times, EPA, its contractors, employees, and any designated EPA representatives may enter and freely move about the facility to, among other things: interview facility personnel and contractors; review Johnson Controls, Inc.'s progress in carrying out the terms of this Order; conduct tests, sampling, or monitoring as EPA deems necessary; use a camera, sound recording, or other documentary equipment; and verify the reports and data Johnson Controls, Inc. submits to EPA. Johnson Controls, Inc. will permit such persons to inspect and copy all non-privileged photographs and documents, including all sampling and monitoring data, that pertain to work undertaken under this Order and that are within the possession or under the control of Johnson Controls, Inc. or its contractors or consultants. Johnson Controls, Inc. may request split samples, or copies of all photographs, tapes, videos or other recorded evidence created by EPA and releaseable under the Freedom of Information Act.

23. If Johnson Controls, Inc. must go beyond the facility's boundary to perform work required by this Order, Johnson Controls, Inc. must use its best efforts to obtain the necessary access agreements from the present owner(s) of such property within 30 days after Johnson Controls, Inc. knows of the need for access. Any such access agreement must provide for access by EPA and its representatives. Johnson Controls, Inc. must submit a copy of any access agreement to EPA's Project Manager. If it does not obtain agreements for access within 30 days, Johnson Controls, Inc. must notify EPA in writing within 14 additional days of both the efforts undertaken to obtain access and the failure to obtain access agreements. EPA may, at its discretion, assist Johnson Controls, Inc. in obtaining access.

24. Nothing in this Section limits or otherwise affects EPA's right of access and entry under applicable law, including RCRA and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. §§ 9601-9675.

VIII. RECORD PRESERVATION

25. Johnson Controls, Inc. must retain, during the pendency of this Order and for at least six years after the Order terminates, all data and all final documents now in its possession or control or which come into its possession or control which relate to this Order. Johnson Controls, Inc. must notify EPA in writing 90 days before destroying any such records, and give EPA the opportunity to take possession of any non-privileged documents. Johnson Controls, Inc.'s notice will refer to the effective date, caption, and docket number of this Order and will be addressed to:

Director
Waste, Pesticides and Toxics Division
U.S. EPA, Region 5

77 W. Jackson Blvd.
Chicago, IL 60604-3590

Johnson Controls, Inc. will also promptly give EPA's Project Manager a copy of the notice.

26. Within 30 days of retaining or employing any agent, consultant, or contractor ("agents") to carry out the terms of this Order, Johnson Controls, Inc. will enter into an agreement with the agents to give Johnson Controls, Inc. a copy of all data and final non-privileged documents produced under this Order.

27. Johnson Controls, Inc. will not assert any privilege claim concerning any data gathered during any investigations or other actions this Order requires.

IX. STIPULATED PENALTIES

28. Johnson Controls, Inc. must pay the following stipulated penalties to the United States for violations of this Order:

a. For failure to submit quarterly progress reports by the dates scheduled in paragraph 20, above: $1,000 per day for the first 14 days and $2,000 per day thereafter.

b. For failure to adequately demonstrate that current human exposures are under control by February 15, 2004: $3,000 per day.

c. For failure to adequately demonstrate that groundwater migration is stabilized by February 15, 2004: $3,000 per day.

d. For failure to submit the Final Corrective Measures Proposal in paragraph 15 by February 15, 2004: $1,000 per day for the first 14 days and $2,000 per day thereafter.

e. For failure to implement, according to the approved schedule, the selected final corrective measures as described in paragraphs 18 and 19: $3,000 per day for the first 14 days and $6,000 per day thereafter.

f. For failure to submit the Final Remedy Construction Completion Report as scheduled in paragraph 15: $1,000 per day for the first 14 days and $2,000 per day thereafter.

29. Whether or not Johnson Controls, Inc. has received notice of a violation, stipulated penalties will begin to accrue on the day a violation occurs, and will continue to accrue until Johnson Controls, Inc. complies. For items b and c, above, stipulated penalties will not accrue

during the period, if any, beginning 31 days after the Environmental Indicators Report is due until the date that EPA notifies Johnson Controls, Inc. in writing of any deficiency in the required demonstration(s). Separate stipulated penalties for separate violations of this Order will accrue simultaneously.

30. Johnson Controls, Inc. must pay any stipulated penalties owed to the United States under this Section within 30 days of receiving EPA's written demand to pay the penalties, unless Johnson Controls, Inc. invokes the dispute resolution procedures under Section X: Dispute Resolution. A written demand for stipulated penalties will describe the violation and will indicate the amount of penalties due.

31. Interest will begin to accrue on any unpaid stipulated penalty balance beginning 31 days after Johnson Controls, Inc. receives EPA's demand letter. Interest will accrue at the current value of funds rate established by the Secretary of the Treasury. Under 31 U.S.C. § 3717, Johnson Controls, Inc. must pay an additional penalty of six percent per year on any unpaid stipulated penalty balance more than 90 days overdue.

32. Johnson Controls, Inc. must pay all penalties by certified or cashier's check payable to the United States of America, or by wire transfer, and will send the check to:

U.S. Department of the Treasury
Attention: U.S. EPA Region 5, Office of the Comptroller
P.O. Box 70753
Chicago, Illinois 60673.

A transmittal letter stating the name of the facility, Johnson Controls, Inc.'s name and address, and the EPA docket number of this action must accompany the payment. Johnson Controls, Inc. will simultaneously send a copy of the check and transmittal letters to the EPA Project Manager.

33. Johnson Controls, Inc., may dispute EPA's assessment of stipulated penalties by invoking the dispute resolution procedures under Section X: Dispute Resolution. The stipulated penalties in dispute will continue to accrue, but need not be paid, during the dispute resolution period. Johnson Controls, Inc. must pay stipulated penalties and interest, if any, according to the dispute resolution decision or agreement. Johnson Controls, Inc. must submit such payment to EPA within 30 days after receiving the resolution according to this Section's payment instructions.

34. Neither invoking dispute resolution nor paying penalties will affect Johnson Controls, Inc.'s obligation to comply with the terms of this Order not directly in dispute.

35. The stipulated penalties set forth in this Section do not preclude EPA from pursuing any other remedies or sanctions which may be available to EPA for Johnson Controls, Inc.'s violation of any terms of this Order. However, EPA will not seek both a stipulated penalty under

this Section and a statutory penalty for the same violation.

X. DISPUTE RESOLUTION

36. The parties will use their best efforts to informally and in good faith resolve all disputes or differences of opinion.

37. If either party disagrees, in whole or in part, with any decision made or action taken under this Order, that party will notify the other party's Project Manager of the dispute. The Project Managers will attempt to resolve the dispute informally.

38. If the Project Managers cannot resolve the dispute informally, either party may pursue the matter formally by placing its objections in writing. A written objection must state the specific points in dispute, the basis for that party's position, and any matters which it considers necessary for determination.

39. EPA and Johnson Controls, Inc. will in good faith attempt to resolve the dispute through formal negotiations within 21 days, or a longer period if agreed in writing by the parties. During formal negotiations, either party may request a conference with appropriate senior management to discuss the dispute.

40. If the parties are unable to reach an agreement through formal negotiations, within 14 business days after any formal negotiations end, Johnson Controls, Inc. and EPA's Project Manager may submit additional written information to the Director of the Waste, Pesticides and Toxics Division, EPA Region 5. EPA will maintain a record of the dispute, which will contain all statements of position and any other documentation submitted pursuant to this Section. EPA will allow timely submission of relevant supplemental statements of position by the parties to the dispute. Based on the record, EPA will respond to Johnson Controls, Inc.'s arguments and evidence and provide a detailed written decision on the dispute signed by the Director of the Waste, Pesticides and Toxics Division, EPA Region 5 ("EPA Dispute Decision").

41. If, at the conclusion of the Dispute Resolution process, Johnson Controls, Inc. notifies EPA that it refuses to implement EPA's selected final corrective measures, EPA will endeavor to pursue the action(s) it deems necessary, if any, within a reasonable period of time.

XI. FORCE MAJEURE AND EXCUSABLE DELAY

42. Force majeure, for purposes of this Order, is any event arising from causes not foreseen and beyond Johnson Controls, Inc.'s control that delays or prevents the timely performance of any obligation under this Order despite Johnson Controls, Inc.'s best efforts.

43. If any event occurs or has occurred that may delay the performance of any obligation under this Order, whether or not caused by a force majeure event, Johnson Controls, Inc. must

notify EPA within two business days after learning that the event may cause a delay. If Johnson Controls, Inc. wishes to claim a force majeure event, within 15 business days thereafter Johnson Controls, Inc. must provide to EPA in writing all relevant information relating to the claim, including a proposed revised schedule.

44. If EPA determines that a delay or anticipated delay is attributable to a force majeure event, EPA will extend in writing the time to perform the obligation affected by the force majeure event for such time as EPA determines is necessary to complete the obligation or obligations.

XII. MODIFICATION

45. This Order may be modified only by mutual agreement of EPA and Johnson Controls, Inc., except as provided in Section VI - Work to be Performed. Any agreed modifications will be in writing, will be signed by both parties, will be effective on the date of EPA's signature, and will be incorporated into this Order.

XIII. RESERVATION OF RIGHTS

46. Nothing in this Order restricts EPA's authority to seek Johnson Controls, Inc.'s compliance with the Order and applicable laws and regulations. For violations of this Order, EPA reserves its rights to bring an action to enforce the Order, to assess penalties under Section 3008(h)(2) of RCRA, 42 U.S.C. § 6928(h)(2), and to issue an administrative order to perform corrective actions or other response measures. In any later proceeding, Johnson Controls, Inc. shall not assert or maintain any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim-splitting, or other defenses based upon a contention that the claims raised by the United States in the later proceeding were or should have been raised here. This Order is not a covenant not to sue, release, waiver, or limitation of any rights, remedies, powers, or authorities of EPA.

47. EPA reserves all of its rights to perform any portion of the work consented to here or any additional site characterization, feasibility study, and remedial work as it deems necessary to protect human health or the environment.

48. If EPA determines that Johnson Controls, Inc.'s actions related to this Order have caused or may cause a release of hazardous waste or hazardous constituent(s), or a threat to human health or the environment, or that Johnson Controls, Inc. cannot perform any of the work ordered, EPA may order Johnson Controls, Inc. to stop implementing this Order for the time EPA determines may be needed to abate the release or threat and to take any action that EPA determines is necessary to abate the release or threat.

49. Johnson Controls, Inc. does not admit any of EPA's factual or legal determinations. Except for the specific waivers in this Order, Johnson Controls, Inc. reserves all of its rights,

remedies and defenses, including all rights and defenses it may have: (a) to challenge EPA's performance of work; (b) to challenge EPA's stop work orders; and (c) regarding liability or responsibility for conditions at the facility, except for its right to contest EPA's jurisdiction to issue or enforce this Order. Johnson Controls, Inc. has entered into this Order in good faith without trial or adjudication of any issue of fact or law. Johnson Controls, Inc. reserves its right to seek judicial review of EPA actions taken under this Order, including a proceeding brought by the United States to enforce the Order or to collect penalties for violations of the Order.

XIV. OTHER CLAIMS

50. Johnson Controls, Inc. waives any claims or demands for compensation or payment under Section 106(b), 111, and 112 of CERCLA against the United States or the Hazardous Substance Superfund established by 26 U.S.C. § 9507 for, or arising out of, any activity performed or expense incurred under this Order. Additionally, this Order is not a decision on preauthorization of funds under Section 111(a)(2) of CERCLA.

XV. INDEMNIFICATION OF THE UNITED STATES GOVERNMENT

51. Johnson Controls, Inc., indemnifies, saves and holds harmless the United States, its agencies, departments, agents, and employees, from all claims or causes of action arising from or on account of acts or omissions of Johnson Controls, Inc. or its officers, employees, agents, independent contractors, receivers, trustees, and assigns in carrying out activities required by this Order. This indemnification will not affect or limit the rights or obligations of Johnson Controls, Inc. or the United States under their various contracts. This indemnification will not create any obligation on the part of Johnson Controls, Inc. to indemnify the United States from claims arising from the United States' acts or omissions.

XVI. SEVERABILITY

52. If any judicial or administrative authority holds any provision of this Order to be invalid, the remaining provisions will remain in force and will not be affected.

XVII. TERMINATION AND SATISFACTION

53. Johnson Controls, Inc. may request that EPA issue a determination that Johnson Controls, Inc. has met the requirements of the Order for all or a portion of the facility. Johnson Controls, Inc. may also request that EPA issue a "no further interest" or "no further action" determination for all or a portion of the facility.

54. The provisions of the Order will be satisfied upon Johnson Controls, Inc.'s and EPA's execution of an "Acknowledgment of Termination and Agreement on Record Preservation and Reservation of Rights," consistent with EPA's Model Scope of Work.

55. Johnson Controls, Inc.'s execution of the Acknowledgment will affirm its continuing obligation to preserve all records as required by Section VIII, to maintain any necessary institutional controls or other long terms measures, and to recognize EPA's reservation of rights as required in Section XIII.

XVIII. EFFECTIVE DATE

56. This Order is effective on the date that EPA signs the Order.

IT IS SO AGREED:

DATE: 12-18-02 BY: ______________________

Authorized agent for
Johnson Controls, Inc.

IT IS SO ORDERED:

DATE: 12-30-02 BY: ______________________

for Joseph M. Boyle, Chief
Enforcement and Compliance Assurance Branch
Waste, Pesticides and Toxics Division
U.S. Environmental Protection Agency
Region 5

RCRA-05- 2003-0004

RECEIVED
REGION 5

CERTIFICATE OF SERVICE

'02 DEC 30 P3:35

I hereby certify that today I filed the original of this **Administrative Order on Consent** and this **Certificate of Service** in the office of the Regional Hearing Clerk (E-19J), United States Environmental Protection Agency, Region 5, 77 W. Jackson Boulevard, Chicago, IL 60604-3590.

I further certify that I then caused true and correct copies of the filed document to be mailed to the following:

Mr. John P. Kennedy
Johnson Controls, Inc.
P.O. Box 591, X-32
Milwaukee, WI 53201

Certified Mail # 7001 0320 0006 1565 2952

I also certify that a copy of the Administrative Order on Consent was sent by first class mail to:

Dennis Reis, Esq.,
P.O. Box 170740
Milwaukee, WI 53217

Dated: December 30, 2002

Katrina D. Jones
Katrina D. Jones
Secretary, ECAB
Waste, Pesticides and Toxics Division
Compliance Section #2

RCRA-05- 2003-0004

B

APPENDIX B
STATISTICAL ANALYSIS OF SOIL DIRECT CONTACT EXCEEDENCES

Appendix B
Surface Soils - 95% UCL Calculations for Chemicals That Exceeded Criteria at Discrete Sample Locations
Johnson Controls, Inc.
Former Stanley Tools

Analyte	Units	Number of Observations	Minimum	Maximum	Mean	Median	Normal Standard Deviation	Coefficient of Variation	Skewness	Variance	Lognormal Standard Deviation	95% UCL	Comments	Exceedance by 95% UCL?
		No Units Applicable	See Analyte	See Analyte	See Analyte	See Analyte	No Units Applicable	No Units Applicable	No Units Applicable	No Units Applicable	No Units Applicable	See Analyte		
Arsenic, Total	mg/kg	99	1.3	44	9.710101	5.4	9.959013	1.025634	1.765637	99.181938	0.894446	14.07	Non-Parametric. Pro UCL Guidance stated a lognormal Standard Deviation of 0.5 to 1.0 requires the use of 95% Chebyshev (Mean, Standard)	GSIP, GSIP-HHB, and Above Background.
Barium, Total	mg/kg	76	9.6	254	73.82105	52.65	64.97288	0.88014	1.405682	4221.4748	0.870036193	93.01	Lognormal Distribution. 95% H-UCL	Above Background.
Cadmium, Total	mg/kg	88	0.016	2.2	0.464875	0.2825	0.507197	1.091039	1.599718	0.2572484	1.121092165	0.65	Lognormal Distribution. 95% H-UCL	None Noted.
Copper, Total	mg/kg	94	1.6	5040	80.26915	13	517.8937	6.451965	9.647838	268213.93	1.135829877	413.86	Non Parametric. Due to lognormal standard Deviation of (1.0, 2.0) the USEPA ProUCL Guidance reccommended 97.5% Chebyshec (Mean, Standard).	GSIP and Above Background.
Lead, Total	mg/kg	88	0.5	104	11.79602	7.25	15.70997	1.331802	3.70992	246.80323	1.043881708	15.51	Lognormal Distribution. 95% H-UCL	GSIP-HHB.
Nickel, Total	mg/kg	90	2.5	66	17.28444	13.2	13.14923	0.760755	2.156107	172.90223	0.613739925	19.25	Lognormal Distribution. 95% H-UCL	None Noted.
Selenium, Total	mg/kg	84	0.11	2.6	0.5525	0.32	0.549023	0.993707	2.157257	0.3014262	0.786951794	0.81	Non-Parametric. Pro UCL Guidance stated a lognormal Standard Deviation of 0.5 to 1.0 requires the use of 95% Chebyshev (Mean, Standard)	GSIP and Above Background.
Silver, Total	mg/kg	68	0.018	2	0.198456	0.086	0.336705	1.696623	3.657834	0.1133702	0.986352382	0.38	Non-Parametric. Pro UCL Guidance stated a lognormal Standard Deviation of 0.5 to 1.0 requires the use of 95% Chebyshev (Mean, Standard)	None Noted.
Zinc, Total	mg/kg	99	9.1	1780	91.82424	49	185.6371	2.021657	7.895654	34461.148	0.992339649	104.58	Lognormal Distribution. 95% H-UCL	Above Background.
Chromium(VI)	mg/kg	96	0.13	57	5.418542	1	8.675526	1.601081	3.091225	75.264745	1.342933873	10.95	Non Parametric. Due to lognormal standard Deviation of (1.0, 2.0) the USEPA ProUCL Guidance reccommended 97.5% Chebyshec (Mean, Standard).	GSIP.
Mercury, Total	mg/kg	80	0.0088	0.2	0.05441	0.05	0.038005	0.698492	1.595757	0.0014444	0.715813092	0.07	Non-Parametric. Pro UCL Guidance stated a lognormal Standard Deviation of 0.5 to 1.0 requires the use of 95% Chebyshev (Mean, Standard)	GSIP-HHB.
Methylene chloride	µg/kg	71	1.5	230	87.37746	75	67.31599	0.770404	0.185297	4531.442	1.444009695	137.27	Non Parametric. Due to lognormal standard Deviation of (1.0, 2.0) the USEPA ProUCL Guidance reccommended 97.5% Chebyshec (Mean, Standard).	Residential Drinking Water.
Trichloroethene	µg/kg	64	2.75	270	35.71797	30.25	31.86063	0.892006	6.493387	1015.0998	0.619663893	53.08	Non-Parametric. Pro UCL Guidance stated a lognormal Standard Deviation of 0.5 to 1.0 requires the use of 95% Chebyshev (Mean, Standard)	None Noted.
Fluoranthene	µg/kg	74	3	9400	291.0608	88.5	1129.573	3.880884	7.513908	1275936	1.6182759	1,111.09	Non Parametric. Due to lognormal standard Deviation of (1.0, 2.0) the USEPA ProUCL Guidance reccommended 97.5% Chebyshec (Mean, Standard).	None Noted.

Ap, .x B

Surface Soils - 95% UCL Calculations for Chemicals That Exceeded Criteria at Discrete Sample Locations

Johnson Controls, Inc.

Former Stanley Tools

Analyte	Units	Number of Observations No Units Applicable	Minimum See Analyte	Maximum See Analyte	Mean See Analyte	Median See Analyte	Normal Standard Deviation No Units Applicable	Coefficient of Variation No Units Applicable	Skewness No Units Applicable	Variance No Units Applicable	Lognormal Standard Deviation No Units Applicable	95% UCL See Analyte	Comments	Exceedance by 95% UCL?
Pyrene	µg/kg	74	2	7300	233.0851	33	875.1317	3.754558	7.519683	765855.48	1.723458815	868.40	Non Parametric. Due to lognormal standard Deviation of (1.0, 2.0) the USEPA ProUCL Guidance reccommended 97.5% Chebyshec (Mean, Standard).	**None Noted.**
Cyanide, Total	mg/kg	113	0.025	4.8	0.300581	0.14	0.525919	1.749679	6.230194	0.2765912	1.110973462	0.61	Non Parametric. Due to lognormal standard Deviation of (1.0, 2.0) the USEPA ProUCL Guidance reccommended 97.5% Chebyshec (Mean, Standard).	**GSIP and Above Background.**

µg/kg - Concentration in units of micrograms analyte per kilogram of material
mg/kg - Concentration in units of milligrams analyte per kilogram of material

C

APPENDIX C
SEDIMENT TECHNICAL MEMORANDUM

DRAFT

TECHNICAL MEMORANDUM: SEDIMENT QUALITY SURVEY, PRELIMINARY SEDIMENT CLEANUP CRITERIA AND DATA EVALUATION RED CEDAR RIVER

FORMER STANLEY TOOLS FOWLERVILLE, MICHIGAN

Prepared for:

Johnson Controls, Inc.

Prepared by:

Earth Tech, Inc.
5555 Glenwood Hills Parkway SE
Grand Rapids, MI 49588-0874

and

Weston Solutions of Michigan, Inc
Suite 100
2501 Jolly Road
Okemos, MI 48864

February 2004

Earth Tech Project No. 65468

SECTION NO.	TITLE	PAGE NO.

APPENDICES

1. INTRODUCTION AND OBJECTIVES

Past releases from the former Stanley Tools plant (the site) in Fowlerville, Michigan impacted sediment in the adjacent Red Cedar River with several chemicals. Extensive studies of the sediments were completed in 2003. Other studies were completed in 1991, 1994 and 2000. The methods and results of the 1994 and 2000 investigations are presented in the *RCRA Facility Investigation*. The results of the 2003 investigations are presented in *Documentation of Environmental Indicator Determination, Part 111/RCRA Corrective Action Environmental Indicator (EI) RCRIS Code (CA775), Current Human Exposures Under Control* (Draft, November 15, 2003). The north ditch and south ditch, which are adjacent to the site, were remediated in 2003. Sediment data collected from these ditches are not evaluated in this memorandum. This technical memorandum includes the results of investigations completed in 1994 and 2000 as part of the *RCRA Facility Investigation* (RFI) and results of investigations completed by Earth Tech/Weston in 2003.

The site is being remediated pursuant to the Resource Conservation and Recovery Act (RCRA) with the U.S. Environmental Protection Agency (EPA) as the lead agency. The EPA RCRA Program has approved the use of the generic cleanup criteria developed by the Michigan Department of Environmental Quality (MDEQ). These generic criteria were developed by the MDEQ pursuant to the Michigan Environmental Response Act (Part 201 – Environmental Response - of Public Act 451 of 1994, as amended (Part 201). Some of the cleanup criteria presented in this Technical Memorandum are generic cleanup criteria developed by the MDEQ pursuant to Part 201. Part 201 does not have sediment quality criteria, but some of the soil criteria can be applied to sediments and some of the methods, data and assumptions used to develop the criteria may also be applied to sediments.

The Red Cedar River is about 25 feet wide at the upstream edge of the site and about 40 feet wide at the Grand River Avenue Bridge over the river at the north edge of the site. The river is shallow and the maximum depth in this area is about 4 feet. **Appendix A** presents photographs of the river near the site. The Red Cedar River is classified as a warm water stream by the Michigan Department of Natural Resources, which means it is capable of supporting warm water fish.

The objectives of this Technical Memorandum are to:

- Present a conceptual site model and identify relevant exposure pathways;

- Present sediment screening criteria based on the relevant exposure pathways that will be used to assess the extent of contamination;
- Present methods and results of sediment investigations completed in 2003;
- Evaluate the available analytical data in relation to these criteria;
- Provide recommendations; and
- Provide a comprehensive document on sediment conditions for EPA and MDEQ.

1.1 CONCEPTUAL SITE MODEL

A conceptual model is an understanding of all of the potential or suspected sources of contamination, types and concentrations of contaminants, potentially contaminated media, potential exposure pathways and potential receptors (*Risk Assessment Guidance for Superfund.* Volume 1, Human Health Evaluation Manual. U. S. Environmental Protection Agency, Office of Emergency and Remedial Response, 1989. EPA/540/1-89-002). The conceptual model for this site was developed and used to identify potential exposure pathways and receptors and to identify applicable sediment screening criteria for these pathways and receptors.

1.1.1 Potential or Suspected Sources of Contamination

Potential sources of sediment contamination for the Red Cedar River near Fowlerville include past direct and indirect (via groundwater or ditches tributary to the river) discharges from the former Stanley Tools plant. There may be other sources, including agricultural and urban storm water runoff, the local wastewater treatment plant, the railroad, and other commercial/industrial properties, contributing to the contamination in the river.

1.1.2 Types and Concentrations of Contaminants

The types and concentrations of contaminants are documented in the *RCRA Facilities Investigation* report and by recent sampling by Earth Tech/Weston, which is presented herein. Some sediment sampling locations in the Red Cedar River near the site have elevated concentrations of certain metals, volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs).

1.1.3 Potentially Contaminated Media

The directly contaminated medium is sediment in the Red Cedar River near Fowlerville. Water may be indirectly contaminated by desorption of contaminants from sediments to the water. Air may be indirectly impacted by chemicals that volatilize from exposed sediments or particulates emitted from sediments that become dry. Fish may be indirectly contaminated due to direct contact with contaminants in the sediment and water or by eating contaminated sediment or food.

1.1.4 Potential Exposure Pathways and Receptors

An exposure pathway describes the course a chemical takes from the source to the exposed person or other living thing. Contaminants may be released from sediments to river water in dissolved form or they may remain associated with sediments. Dissolved chemicals will be transported downstream by flow. Chemicals also may adsorb onto sediments, which may be transported downstream as well. Chemicals may volatilize from either contaminated sediment or water to the air. Chemicals that are adsorbed onto sediments may become airborne if the sediments are exposed and become dry. Lipophilic chemicals, such as PCBs, tend to bio-accumulate in fish and may biomagnify through the aquatic food chain.

Receptors are people or other living things that may be directly or indirectly exposed to contamination in various environmental media. People may be exposed to sediment contaminants by direct contact with the sediment, incidental ingestion of sediment, direct contact with the water, incidental ingestion of the water, inhalation of chemicals that have volatilized to air and inhalation of particulates that have become airborne. People may also be exposed to contaminants in the sediments by ingesting fish in which contaminants have bio-accumulated. The Red Cedar River is not a drinking water source, although people may ingest small amount of water incidental to other activities such as swimming. Aquatic life may be exposed to contaminated sediment by direct contact with sediment, direct contact with the water, respiration, and ingestion of contaminated sediment or other food.

The Red Cedar River in Fowlerville downstream of the Stanley Tools site flows through areas that are mostly commercial or wetland/floodplain rather than residential or public. While there may be occasional recreational activity such as swimming or canoeing, the river is too small to support regular recreational activities. There are no swimming beaches or canoe liveries nearby. Children may be present in the river on an irregular basis. Children may have higher direct contact exposure to contaminated sediment than adults because they have lower body weights, greater surface area to body weight ratios, and because they are more likely to play in the mud. Children may be a sensitive group of receptors because of their potentially greater exposures to chemicals in the sediment.

There is no indication that the Red Cedar River near the site supports a significant sport fishery (e.g., observation of fishing activity, lost fish lines, bait shops, marinas, etc.). The stream is so small it could not support such an active fishery for long. Game-sized fish of any species were not caught in an extensive electroshocking survey of the river near the site during October 2003. The fisheries biologist's professional judgment was that larger fish will not remain in a relatively small stream during colder months and that larger fish, including carp, will return in the spring. Anglers would go elsewhere nearby where there are more and better sport fishing opportunities.

In summary, the potentially complete exposure pathways and receptors are:

- People may be exposed to sediments by dermal contact and incidental ingestion;
- People may inhale chemicals that have volatilized from exposed sediments or from the water;
- People may inhale chemicals associated with particulate material released to air from exposed sediments;
- People may ingest fish that have bio-accumulated certain chemicals; and
- Aquatic life may be exposed by dermal contact with sediments and ingestion of contaminated sediment or food.

2. SEDIMENT SCREENING CRITERIA

Table 1 summarizes the sediment screening criteria. These criteria are used in Section 4 to evaluate the nature and extent of contamination in the Red Cedar River near Fowlerville. These criteria include:

- Site-specific background criteria;
- PCB sediment/soil regulatory criterion;
- Site-specific human health criteria for direct contact and ingestion;
- Sediment criteria to protect air;
- Bioaccumulation in fish and human health; and
- Sediment criteria to protect aquatic life.

These screening criteria address each of the pathways identified in the Conceptual Site Model (Section 1.1.4). The PCB sediment/soil regulatory criterion addresses, in part, bioaccumulation and ingestion of fish, and has been applied at sediment sites in the Great Lakes area. Part 201 also specifies "other considerations" for evaluation of sediments. These qualitative issues are considered in Section 2.8. Some of the criteria in this section (Section 2.0) are generic and others are site-specific. Part 201, Rule 299.5730, provides for site-specific sediment evaluations of sediment toxicity and benthic community populations, which have not been done at this site.

The U.S. EPA uses a method called surface weighted average concentration (SWAC) to develop and implement sediment remediation. The SWAC determines the average concentration of a contaminant for a particular length of river (reach). This method has been applied at several Superfund sites including the Fox River in Wisconsin, the Shiawassee River in Michigan, and Fields Brook in Ohio. In addition to comparing sediment data to criteria on a point-by-point basis, SWACs are also used in this document for criteria comparisons.

2.1 BACKGROUND CRITERIA

Site-specific background criteria were developed based on the results of 10 to 19 (depending on the chemical) sediment samples collected upstream of the former Stanley Tools site. These criteria and the statistical evaluations are presented in **Appendix B**. **Table 1** summarizes the background criteria. MDEQ statistical procedures developed by the Remediation and Redevelopment Division were used to calculate these background criteria. The background criteria for some chemicals (arsenic, for example) exceed one or more of the other sediment criteria. In these cases, the background criteria were used to evaluate the sediment data, following Part 201 guidance.

2.2 PCB CRITERION

The screening criterion for PCBs is 1.0 mg/kg, which is the cleanup level for bulk PCB remediation waste in high occupancy areas from the Toxic Substances Control Act (40 CFR 761) and which is referenced by Part 201 (Rule 200.5750(1)(T). The MDEQ Water Division has recommended this PCB criterion at other sediment sites and it has been used at several EPA sites in the Great Lakes area. A summary of sediment cleanup criteria for PCBs at other sites in the Great Lakes area is presented below:

Site Name	PCB Sediment Cleanup Criterion	Reference
Fox River WI	Dredge to 1 ppm,	Record of Decision
Fox River - Deposit 56/57 (WI)	1 ppm, surface area weighted average concentration	Realizing Remediation July 2000 Update for Areas of Concern EPA, 2002
Maumee River Tributary, OH	5 to 10	Remediation of Contaminated Sediment at the Unnamed Tributary to the Ottawa River Summary Report, EPA, January 2000
Manistique River and Harbor, MI	10 ppm	Realizing Remediation July 2000 Update for Areas of Concern EPA, 2002
St. Lawrence River - General Motors Site (NY)	1 ppm	Realizing Remediation July 2000 Update for Areas of Concern EPA, 2002
Shiawassee River, MI	1 ppm, surface weighted average concentration	Record of Decision
Waukegan Harbor, IL	50 ppm	Record of Decision
Ruddiman Creek, MI	1 ppm	MDEQ
White Lake	2 ppm surface concentration	Basis of Decision

2.3 DIRECT CONTACT

Screening criteria for protection of human health related to dermal contact with and incidental ingestion of sediments were developed using the same formulae (Rule 299.5720, Michigan Administrative Code) and chemical specific parameters (Rule 299.5752) used by Part 201 for soil direct contact criteria. **Table 1** summarizes these criteria.

Exposure assumptions recommended by the MDEQ were used to represent sediment direct contact exposures. Specifically, the MDEQ recommends assuming a child would be exposed to the sediments for 52 days a year (exposure frequency) for both dermal and ingestion exposures. This frequency is based on exposure four times/week during the warmer summer months (June through August) and twice/month during the cooler months of May and September. The MDEQ recommends a sediment ingestion factor of 74 mg-year/kg-day, slightly less than the 114 mg-year/kg-day used for soil. The MDEQ recommends a sediment dermal factor of 310 mg-year/kg-day, slightly less than the 353 mg-year/kg-day used for soil. The adjustments to the soil ingestion factor and the soil dermal factor reflect different age groups that the MDEQ assumes to be exposed to sediment. The MDEQ assumes the age group most likely to be exposed to sediment is 2 to 12 years old. In contrast, the age group for soil direct contact exposure includes adults. The equation, assumptions and values of parameters are presented in **Appendix C**.

The MDEQ Water Division has used the same method and exposure assumptions to evaluate sediment contamination at other locations (Dennis Bush, MDEQ Water Division, personal communication to Glenn Hendrix, Earth Tech, June 9, 2003).

2.4 PROTECTION OF AMBIENT AIR

Part 201 "generic cleanup criteria for soil based on inhalation of hazardous substances in ambient air" (Rule 299.5726) were used to evaluate the potential impact of sediment contaminants on air quality in relation to human health. There are also soil criteria for impacts on indoor air, but these are not relevant for sediments since a building would not be built over the river sediments. These criteria account for volatilization of chemicals to outdoor air and suspension of sediment particulate matter in outdoor air; this could occur if sediments were exposed and dried. The criteria for protection of ambient air are intended for soil and not applicable to sediments because sediments are not normally exposed to air. The application of these criteria to sediments is therefore conservative. These criteria are used as screening criteria to determine if further evaluation was appropriate. The Part 201 criteria for protection of ambient air are from Rule 299.5746 of the Michigan Administrative Code. These criteria are presented in **Table 1**.

2.5 BIOACCUMULATION IN FISH AND HUMAN HEALTH

Bioaccumulation is the accumulation of contaminants in the tissue of organisms through any route, including respiration, ingestion, or direct contact with contaminated water, sediment, pore water, or dredged material (EPA 2002. *Bioaccumulation Testing and Interpretation for The Purpose of Sediment Quality Assessment: Status and Needs.* EPA-823-R-00-001. February 2000). EPA's Bioaccumulation Analysis Workgroup (EPA 2000) developed a list of potential bioaccumulative chemicals. Of these potential bioaccumulative chemicals, 24 were detected in Red Cedar River sediments at concentrations above background. These chemicals include mercury, certain PAHs and PCBs.

Mercury, primarily as methylmercury, has the potential to biomagnify in the aquatic environment. Total mercury was detected in only 5 out of 121 discrete sediment samples slightly above background concentrations (0.16 mg/kg at SE/RC-9/2; 0.19 mg/kg at SE/RC-7/2; 0.26 mg/kg at SD-L2; 0.3 mg/kg at SD-E1; 0.41 mg/kg at SD-E2), and the average of detected concentrations (0.061 mg/kg) is below background (0.147 mg/kg). Since the background criterion is a 95% upper confidence limit of the mean concentration, it is expected that a few samples will exceed the mercury criterion.

Benzo(a)pyrene, which was detected in river sediments, is a polycyclic aromatic hydrocarbon (PAH). In general, PAHs are rapidly metabolized and considered unlikely to biomagnify despite their high lipid solubility (Eisler, R., 1987. *Polycyclic Aromatic Hydrocarbons Hazards to Fish, Wildlife and Invertebrates: A Synoptic Review.* USFSW Biological Report 85(1.14). Contaminant Hazards Reviews. Report 14, April). PAHs are more of concern in marine and estuarine environments than in freshwater systems, where bioaccumulation in shellfish and bivalves has been observed. In contrast to the other chemicals detected in Red Cedar River Sediment, PCBs have potential to biomagnify in aquatic ecosystems. The regulatory criterion of 1 mg/kg was used for PCBs. Although this criterion does not specifically consider bioaccumulation, it has been applied at several sediment remediation sites in the Great Lakes area, including sites with evidence of significant sport fishing (See Section 2.2). There is no evidence of a significant sport fisher in this part of the Red Cedar River.

Standard risk assessment models and assumptions were used to develop a site-specific sediment quality criterion for PCBs that is protective of human health. These models include a sediment bioaccumulation model that estimates concentrations in fish, a model that estimates fish ingestion by people and a model that estimates human health risk associated with fish ingestion. These models and assumptions are presented in **Appendix D**. The resulting sediment criterion for PCBs is 7.68 mg/kg. The excess incidence of cancer is not expected to exceed one in one hundred thousand if average concentrations (i.e., 95% upper confidence limit (UCL) on the mean) of total PCBs in sediments near the site do not exceed 7.68 mg/kg (Michigan uses a one in one hundred thousand as the basis for developing cleanup criteria and water quality values for carcinogens).

2.6 AQUATIC LIFE

"Threshold Effect Concentrations" (TECs) and "Probable Effect Concentrations" (PECs) were used to evaluate potential effects of sediment contaminants to benthic macroinvertebrates. The TECs and PECs are from *Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems* by D. MacDonald, C. G. Ingersoll and T. A. Berger (Archives of Environmental Contamination and Toxicology, 39, 20-31 (2000)). The MDEQ Water Division uses TECs and PECs as screening criteria to evaluate sediment chemistry data. TECs are defined as concentrations below which adverse effects are not expected to occur. PECs are concentrations above which adverse effects are expected to occur. The TECs are established so that there is a 75% probability that the sediments are not toxic if the concentrations are less than the TEC. The PECs are established so that there is a 75% probability that the sediments are toxic if the concentrations exceed the PECs. The PECs and TECs are summarized in **Table 1**. The TECs and PECs are the most restrictive (lowest) criteria of all the sediment screening criteria presented in this memorandum for most chemicals. TECs and PECs are not available for all of the chemicals.

A mean PEC quotient is used to evaluate sediments, following methods presented in MacDonald et al. (2000). The mean PEC quotient is the sum of the ratios of the concentration of a chemical to the PEC for that chemical for all chemicals in a sample divided by the number of chemicals in the sample with PECs. Mathematically this is

$$\text{Mean PEC Quotient} = [\Sigma\,(C\,i/PECi)]/N;$$

Where Ci is the concentration of chemical i; PECi is the Probable Effects Concentration for Chemicals i; and N is the number of chemicals with concentrations and PECs in the sample.

The mean PEC quotient provides a method to evaluate the significance of the mixture of chemicals (with PECs) in a sample instead of a chemical-by chemical-evaluation. Samples with a mean PEC quotient greater than 0.5 are very likely to be toxic to sediment-dwelling organisms. The mean PEC quotients are presented in **Table 2**.

2.6 PART 201 "OTHER CONSIDERATIONS"

Administrative rules for Part 201 specify other considerations for sediment evaluations (Rule 299.5730). Site-specific cleanup criteria are to be based on sound scientific principles and evaluation of bulk sediment chemistry, sediment toxicity and benthic community populations. The bulk sediment chemistry data are provided in **Tables 2 and 3**. The TECs and PECs provide for evaluation of sediment toxicity to the benthic community since these are considered in the development of TECs and PECs. The other Part 201 considerations are discussed below.

- <u>Restrictions on fish or wildlife consumption</u>. There are fishing advisories for the Red Cedar River. Women and children are advised to limit consumption of smaller (less than 18 inches) carp to one meal per week or less and larger carp to one meal per month or less due to PCBs. Most waters in Michigan have similar restrictions.

- <u>Tainting of fish and wildlife flavor</u>. ET/W is not aware of any tainting of fish or wildlife flavor in this area.

- <u>Degraded fish or wildlife populations</u>. ET/W is not aware of any degradation of fish or wildlife populations related to sediment contamination.

- <u>Fish tumors or other deformities</u>. ET/W is not aware of any fish tumors or other deformities in this area.

- <u>Bird or animal deformities or reproductive problems</u>. ET/W is not aware of any bird or animal deformities or reproductive problems in this area.

- <u>Degradation of benthos</u>. Past studies by the state have shown some degradation of benthos in this area when the former Stanley Tools facility was operating. Subsequent studies showed some recovery after operations ceased.

- <u>Restriction on dredging activities</u>. Existing sediment contamination may require some restrictions on dredging activities. These restrictions may include a restriction on disposal locations and a restriction during the dredging process to minimize mobilization of contaminants.

- <u>Eutrophication or undesirable algae</u>. The sediment contaminants in this area are not nutrients that could cause eutrophication or growth of undesirable algae.

- <u>Restriction on drinking water consumption or taste or odor problems</u>. The Red Cedar River is not used as a source of drinking water, although there are no restrictions for such use nor are there known taste or odor problems.

- Beach closings. There are no beaches on this part of the Red Cedar River.
- Degradation of aesthetics. The sediment impacts are not visible and do not degrade aesthetics.
- Added costs to agriculture, industry or a local unit of government. The impacts to sediments have not added costs related to agricultural or industrial activities. Construction projects involving dredging could add costs to industry or local government.
- Degradation of phytoplankton or zooplankton populations. ET/W is not aware of any degradation of phytoplankton or zooplankton populations in the area.
- Loss of fish and wildlife habitat. Habitat in this area is degraded by siltation from many sources, storm water runoff and possibly contamination. The habitat area is small in relation to the available habitat nearby.
- Unacceptable risk through human contact as a result of absorption of hazardous substances through the skin or by incidental ingestion of sediments. ET/W evaluated the risk of human (children) contact with sediments using adjustments to the soil criteria developed in Part 201 (Section 2.3 and Section 4.3)
- Other unacceptable risks to human receptors exposed to hazardous substances in sediments. The risk-based sediment criterion for PCBs is 7.68 mg/kg (see Section 2.5 and **Appendix D**). Sediment PCB concentrations exceeded this criterion in two out of 271 samples. The average sediment PCB concentration was much less than this criterion. The risks associated with fish ingestion are within acceptable limits. Concentrations of chemicals in sediments are less than criteria developed to protect human health associated with dermal contact with and incidental ingestion of sediments (see Sections 2.3, 4.3 and **Appendix C**).

3. METHODS

The methods presented here apply to the sediment investigation completed in 2003 by Earth Tech/Weston. The RFI investigation was completed earlier by others and the methods are included in the RFI report. This technical memorandum includes results from both the RFI and work completed in 2003 by Earth Tech/Weston. Sediment samples from the ditches have been excluded since these features have been remediated.

A total of 151 sediment samples were collected from the Red Cedar River between I-I-96 freeway on the south (upstream of site) and Gregory Road located north and downstream of the site. Most of the samples were collected between the railroad bridge next to the south boundary of the site and the Grand River Avenue bridge over the river to the north of the site. Of these, 53 were collected and analyzed as part of the RFI and 98 were collected and analyzed by Earth Tech/Weston.

3.1 SAMPLING LOCATIONS

All the 2003 "investigative" samples were collected between the railroad bridge and the Grand River Avenue Bridge over the river since this was the area closest to the former plant and the area where previous investigations found the highest concentrations. Background sample were collected upstream of the site and the railroad bridge. **Figure 1** shows the sediment sample locations. All locations were surveyed with a global positioning system after the samples were collected. Section 1 provides a description of the river and photographs are presented in **Appendix A**.

3.1.1 Investigative Sample Locations

Samples were collected from 13 transects across the river. The sample locations are shown in **Figure 1**. In general three locations were sampled across each transect and samples were collected at two depths per location. The selection of transects and locations was biased to sampling sediments likely to have elevated concentrations of chemicals released from the site. This bias involved sampling near areas where past releases were known to have occurred (the former outfalls and ditches), sampling depositional areas such as the inside of bends in the river where deposition was more likely and sampling "softer" sediments. The softness of the sediments was evaluated in the field using a steel rod. The locations of transects was determined in the field based on field conditions. The sample locations are not all exactly on the transect line due to this deliberate field conditions bias.

Transects are labeled A through M, with A being the furthest upstream transect and M the furthest downstream. Transect A was located just downstream of the south ditch, or at the upstream edge of the site. Transects B through F were adjacent to the former developed portion of the site, and transect E was near the former outfall of wastewater to the river. Transects G, H and I were located next to a part of the site where plating sludge was managed. Transect J was located immediately downstream of the north ditch. Transects K, L and M were located adjacent to the undeveloped northern part of the site between the north ditch and the Grand River Avenue bridge across the river. This part of the site is mostly wetland except for a small access road along the river. The sample locations are shown in **Figure 1**.

Sediment sample locations from the *RCRA Facilities Investigation* Report (2000) were not labeled systematically in relation to the site. These sample locations are also shown on **Figure 1**.

Samples were generally collected from approximately 0 to 12 inches and 12 to 24 inches at each location. A quite hard layer was encountered at approximately 24 inches at most locations and the Vibra-core sampling equipment could not penetrate this dense layer without compromising the integrity of the stratification of the shallower sediments. Deeper samples were collected at some locations using a different method to provide data on this deeper layer. **Tables 2 and 3** document the depths from which the sediment samples were collected.

Soil samples were collected from seven locations (D1, D2, C2, E1, E2, I1 and I2) in the floodplain on the west side of the river. These locations were in line with the sediment transects with the same letter designations. D2, E2 and I2 were collected approximately 40 feet from the riverbank. D1, E1, and I1 were collected at the riverbank. These soil samples were collected from 0-6 inches below the surface. The objective of collecting these samples was to assess the possibility that PCBs associated with floating oils may have been deposited in floodplain soils as a result of high water levels in the river.

3.1.2 Background Sample Locations

Background locations were selected between the railroad bridge along the south, or upstream edge of the site and the Garden Lane bridge over the river. These locations were upstream of a small ditch immediately north of the railroad tracks and downstream of a large storm drain that flows into the river on the north side of Garden Lane. The east side of the river in this area is residential and there is a wooded floodplain/wetland on the west side. Only surface samples (0 to 12 inches) were collected from background locations.

3.2 SAMPLE COLLECTION METHODS

Several methods of sampling were tested initially to identify the best sample collection method. A hand-held Vibra-core was found to be most effective overall. A different method was used to collect some samples from a deep dense layer that the Vibra-core could not sample effectively. This section describes the Vibra-core and the deep sediment sampling methods.

Duplicate samples were collected at ten percent of the sample locations.

All sediment samples were marked temporarily with a stake and the location of the stake was later identified with a global positioning system.

3.2.1 Initial Test of Sampling Equipment

The Vibra-core sampler was selected after an initial field evaluation of a Wildco core sampler and a macro-core sampler with a hammer to pound in the core tube. The Wildco sampler could not collect cores of sufficient depth. The Macro-core sampler core was difficult to use and resulted in significant compression of the sediment core within the tube, which distorted the stratigraphy of the core sample. The Vibra-core sampler was fairly simple to use and resulted in minimal compression of the core sample. The Vibra-core sampler also has advantages for processing the samples. Specifically, polycarbonate tube allows the cores to be inspected visually and the tubes can be cut to the desired depth intervals. Handling of the sample is also minimized with the Vibra-core.

3.2.2 Vibra-core Sampling

Most of the samples were collected with a hand-held Vibra-core sampler. This tool uses a vibrating motor powered by a 12-volt battery to gently vibrate a 2-inch diameter polycarbonate core tube into the sediments. The deeper core intervals (more than 24 inches) could not be effectively sampled with the Vibra core sample and a different method was used.

Each sample location was determined in the field by looking for depositional areas with soft sediments. The Vibra-core sampler was used to collect a 2-inch diameter core about 24 inches long. The Vibra-core sampler was allowed to penetrate into the sediments using its own weight and the vibration of the motor; the sampler was not forced into the sediments except for the last few inches where the dense layer was encountered. The depth of penetration of the sampler into the sediments and the length of the collected core were measured and this information was used to evaluate effectiveness of the sampling.

In general, samples were collected beginning with the furthest downstream location and progressing upstream on a daily basis. The person collecting the sample stood downstream of the sampler to avoid disturbing the sample location with his/her feet and to avoid collecting sediments suspended by walking in the river.

Each core tube was labeled with the location before the sample was collected. After the cores were collected, the motor was removed from the tube, the tube was lifted out, and caps were placed on either end. Water was drained from the top of the core by cutting a slot at the sediment water interface and gently draining off the water. The core was then cut through at this location and capped. The cores were then stored on ice until the samples were processed.

The core samples were processed in the exclusion zone. Most of the cores were photographed. The tubes were cut into 12-inch depth intervals and each of these was gently extruded into a stainless steel bowl. Sub-samples for VOC analyses were collected immediately thereafter with Encore samplers. The remaining sample was mixed and then placed into appropriate pre-labeled sample containers. Larger materials such as pebbles and wood were not sampled. The bottles were capped, cleaned of excess sediment and placed in coolers with ice. Samples were transferred to the laboratory daily with chain-of-custody documentation.

3.2.3 Deep Sediment Sampling

The Vibra-core sampling was effective for collecting sediment cores up to approximately 24 inches below the sediment surface. Below that depth, the Vibra-core sampler encountered a dense layer of compact fine sand. This layer was light-colored and visually distinct from shallower sediments as well as being physically much denser and more difficult to penetrate with sampling equipment. This dense layer occurred in most sample locations and was also encountered during initial survey work with a steel rod to identify depositional areas.

The Vibra-core could not sample this dense layer effectively. A double casing method was used to collect samples from the dense layer. A 4-inch inside diameter PVC pipe was hammered through the softer shallow sediments and then the sediment inside the pipe was removed with a bucket auger, then the pipe was driven further into the sediments again and augered out again as many times as necessary until the desired sample depth was reached. The deep sediment sample was then collected from the bottom of the pipe with a decontaminated bucket auger.

Samples of the deep dense layer of fine sand were collected from:

- SD-B3 (36 to 42 inches);
- SD-C3 (42 to 48 inches);
- SD-H1 (24-36 inches);
- SD-H2 (24-45 inches);
- SD-I1 (24-45 inches); and
- SD-I1 duplicate (24-45 inches).

3.3 ANALYTICAL PARAMETERS AND METHODS

Samples were analyzed for the following parameters using the indicated methods:

Volatile Organic Chemicals	SW8260B
Semi-Volatile Organic Chemicals	SW8270C
Polychlorinated Biphenols (as Aroclors)	SW8282
Metals (Arsenic, barium, cadmium, chromium, copper, lead, nickel, selenium, silver, zinc)	SW6020
Hexavalent chromium	SW7196
Mercury	SW7471
Cyanide, free and total	SW9014
Aluminum*	SW6020
Grain size*	ASTM D422 hydrometer
Fraction organic carbon	ASTM D 2974-8r
Percent solids	E160.3

* Not all samples analyzed for grain size and aluminum. Analysis for free cyanide was done only if total cyanide was present.

Some samples were analyzed for grain size and aluminum to characterize the texture of the sediments and determine if there was a relationship between grain size and concentrations of other inorganic chemicals. The sediments were found to be fairly uniform in texture and the relationship between grain size and chemicals concentration was not evaluated further.

3.4 SURFACE AREA WEIGHTED AVERAGE CONCENTRATIONS

It is useful to compare sediment data to criteria on a point-by-point basis in order to identify potential areas with elevated concentrations or "hot spots." However, people and aquatic organisms are exposed to areas of sediment rather than any single point where concentrations of one or more chemicals may exceed sediment screening criteria. A surface weighted average concentration (SWAC) is often used to evaluate potential exposures and compliance with sediment criteria (see Section 2.2 for examples).

To calculate a surface area weighted average concentration in sediments, the sum of the products of each sediment concentration multiplied by the area represented by that concentration are divided by the total area of the site or unit, according to the following equation:

$$WC = \Sigma (SC_i * A_i) / TA$$

Where:

WC= surface area weighted average sediment concentration

SC_i = Sediment concentration in an individual area

A_i = Area associated with each individual sediment concentration

TA = Total area of interest

The Theisen Method was used to calculate all area values. For total PCBs, areas were calculated using both the RFI data and data from Earth Tech/Weston's investigations in 2003. For all other chemicals, areas were calculated using only the 2003 investigation data. This was necessary because the RFI data did not include results for all chemicals in every sample.

4. DATA EVALUATION

The significance of potentially complete exposure pathways was evaluated by comparing bulk sediment data at discrete sample locations to the screening criteria presented in Section 2 and summarized in **Table 1**. The TEC and PEC criteria are also presented with the data in **Tables 2** with the sample data for samples with concentrations of one or more chemicals that exceeded the PEC. **Table 3** presents all the analytical data for sediments. **Figure 1** is a map of sample locations.

In general, concentrations decrease further downstream from the site and the sample just upstream of the Grand River Avenue Bridge over the river (SE/RC/20/1) met all the criteria. However, sediment concentrations reported in the RFI for locations further downstream of Grand River Avenue were higher than upstream samples and do not fit this generalization.

4.1 SITE-SPECIFIC BACKGROUND CRITERIA

Site-specific background criteria are presented in **Table 1**. All of the samples used to develop these criteria were collected upstream of the site and the railroad bridge. The texture of the background sediments was fine sand and was generally similar to other samples.

The site-specific background criteria for inorganic chemicals are generally similar to statewide default background criteria for soils developed for Part 201. The site-specific criteria for arsenic, barium, selenium and zinc are somewhat higher that state background criteria. The site-specific criteria for cadmium, chromium, copper, cyanide, lead, mercury, nickel and silver are approximately the same as or somewhat less than the state default criteria. Hexavalent chromium was not detected in the background samples, but some of the detection limits were elevated due to interference.

Some PNAs were detected in background sediments. The concentrations of PNAs in the background samples may be due to natural sources or to urban runoff from the City of Fowlerville.

4.2 PCB SEDIMENT/SOIL REGULATORY CRITERION

The analytical data for total PCBs were compared to the PCB sediment criterion of 1 mg/kg. The PCB criterion was exceeded in five of the 151samples:

- SD-E1 (9.18 mg/kg)

- SD-E2 (4.9 mg/kg)
- SE/RC3/12 (4.9 mg/kg)
- SE/RC6/12 (11 mg/kg); and
- SE/RC 5/3 (6.5 mg/kg).

These results identify a small area around transects D and E with concentrations of PCBs above the criterion. These transects are adjacent to the site and one of the former outfalls. SE/RC 5/3 is located further downstream. SE/RC 5/3 was collected as part of the RFI. Concentrations of PCBs in samples near SE/RC 5/3 collected in 2003 were much lower, indicating either that the area with concentrations of PCBs above the 1 mg/kg criterion is quite small and/or that concentrations have decreased since the initial sample was collected.

The risk-based sediment criterion for PCBs is 7.68 mg/kg (see Section 2.5 and **Appendix D**). Sediment PCB concentrations exceeded this criterion at only two locations. The average sediment PCB concentration, 0.38 mg/kg (95% UCL, **Appendix E**), was much less than this criterion.

PCBs were not detected in the floodplain soil samples collected on the west side of the river, opposite the plant site.

4.3 SITE-SPECIFIC HUMAN HEALTH CRITERIA FOR DIRECT CONTACT AND INGESTION

The site-specific criteria for human health direct contact and ingestion are presented in **Table 1**. Concentrations of all chemicals in all of the samples were less than these criteria.

4.4 SEDIMENT CRITERIA TO PROTECT AIR

The generic Part 201 criteria for protection of outdoor air impacts due to volatilization of chemicals or release of chemicals in particulate material from exposed sediments are presented in **Table 1**. These criteria were developed for soil and this pathway would only occur if sediments were exposed to air for an extended period. Concentrations of all chemicals in all of the samples were less than these criteria.

4.5 AQUATIC LIFE

The generic criteria for protection of aquatic life are presented in **Table 1**. These criteria are <u>not</u> based on site specific testing, such as toxicity testing or biological surveys.

The PEC quotient described in Section 2.6 was used to screen sediments and identify sample locations potentially toxic to aquatic life. These sample locations are colored red in **Figure 1**. Twenty-seven of the 151 samples collected (14% of the samples) exceeded the PEC quotient criterion. These samples were deliberately collected from locations where concentrations were expected to be high, so these data are not representative of average conditions.

Impacted (PEC quotient greater than 0.5) sediments occur in the following general areas:

- Transect A/South Ditch
- Transects D and E
- Between Transect F and the North Ditch
- Between the North Ditch and Grand River Avenue Bridge
- Downstream of Grand River Avenue Bridge

Even within these general areas, concentrations of some samples exceeded PEC criteria and some did not.

4.5.1 Transect A/South Ditch Area

This area includes transect A and nearby samples. The important chemicals in this are in relation to the criteria are VOCs, PNAs, and certain metals. PCBs were only detected in one sample (SE/RC 1/3) from this area at a concentration well below the 1 mg/kg criterion. Samples from transect B, which is just downstream of transect A, met all criteria.

4.5.2 Transects C, D and E Area

This general area is limited on the upstream side by transect B and on the downstream side by transect F; none of the samples from transects B and F exceeded the PEC quotient. This is the area where the former outfalls were located (one outfall was located between transect D and E; the other outfall was located immediately south of transect C) and is also the area with generally the highest concentrations and highest PEC quotients. Most chemicals, including PCBs, occurred with the highest concentrations in this area.

4.5.3 Between Transect F and the North Ditch Area

Transect F was not impacted, but several samples in transect G, H, and I were, as well as RFI samples from this area. Concentrations of VOCs, PNAs, PCBs and metals were generally lower than upstream locations. The maximum concentration of hexavalent chromium (26 mg/kg) was detected in (SD-I3) from this area.

4.5.4 Between the North Ditch and Grand River Avenue Bridge Area

This area is not well defined by the data, but concentrations are generally lower than upstream locations and the PEC quotients are also lower. The PEC quotient criterion was exceeded by one sample in each of the transects (J, K, L and M). The chemicals most responsible for the exceedances are arsenic, chromium, copper, lead, nickel and zinc. The downstream limit of this general area is defined approximately by samples the samples closest to the bridge (SE/RC-20/1, SE/RC-8/1 and SE/RC-8/2), in which the PEC quotients were less than the criterion.

4.5.5 Downstream of Grand River Avenue Bridge Area

Some samples (SE/RC-7/1, SE/RC-7/2, SE/RC-17/1 and SE/RC-17/2) collected during the RFI downstream of Grand River Avenue had concentrations of some PNAs and metals above the criteria. These locations are downstream of a large ditch that flows into the river between Grand River Avenue and the municipal wastewater treatment ponds and are separated from the site by a number of samples that met all criteria. This suggests this ditch is the source of impacts to the sediments in these downstream samples rather than the former Stanley Tools site.

It is also possible the area around SE/RC-7/1, SE/RC-7/2, SE/RC-17/1 and SE/RC-17/2 is a depositional area and the sediments between Grand River and these sample locations are not in depositional area; this could explain the unimpacted sediments between the site and these downstream samples. However, a visual inspection of this area did not identify any obvious differences in the depositional character of the river between the site and the municipal wastewater ponds. Therefore it is likely that the impacts in these downstream samples are from another source.

4.6 DEEP SEDIMENTS

Results of the deep sediment samples are presented in **Tables 2 and 3**. The deep sediment samples are SD-B3 (36 to 42 inches), SD-C3 (42 to 48 inches) SD-H1 (24-36 inches), SD-H2 (24-45 inches), SD-I1 (24-45 inches) and SD-I1 duplicate (24-45 inches).

Five of the six deep sediment samples met all the criteria. SD-C3 (42-48 inches) exceeded some TECs for metals, but met all the PEC criteria. The PEC quotient for this sample was 0.53, slightly more than the PEC quotient criterion of 0.5.

4.7 SURFACE AREA WEIGHTED AVERAGE CONCENTRATIONS

Table 4 presents surface area weighted average concentrations (SWACs) for the entire investigation area. The SWAC for total PCBs includes data from both the RFI and data from Earth Tech/Weston's investigations in 2003. The SWACs for other chemicals are based only on data from Earth Tech/Weston's investigations in 2003. This was necessary because the RFI data did not include results for all chemicals in every sample. The SWACs are less than the PEC screening criteria for all chemicals with PECs. The SWACs are presented for purposes of data evaluation.

5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 SUMMARY AND CONCLUSIONS

The objectives of this Technical Memorandum are to:

- Present a conceptual site model and identify relevant exposure pathways;
- Present sediment criteria based on the relevant exposure pathways that will be used to assess the extent of contamination;
- Present methods and results of sediment investigations completed in 2003;
- Evaluate the available analytical data in relation to these criteria;
- Provide recommendations; and
- Provide a comprehensive document on sediment conditions for EPA and MDEQ.

The following table lists the exposure routes identified by the conceptual site model in Section 1 and the corresponding sediment criteria identified in Section 2:

Exposure Pathway	Criteria	Evaluation of Data
People may be exposed to sediments by dermal contact and incidental ingestion.	Site-specific human health criteria for direct contact and ingestion.	All sediment data less than criteria.
People may be indirectly exposed by dermal contact or incidental ingestion of water impacted with chemicals released from the sediments.	Sediment criteria to protect surface water.	All sediment data less than criteria.
People may inhale chemicals that have volatilized from exposed sediments or from the water.	Sediment criteria to protect air.	All sediment data less than criteria.
People may ingest fish that have bio-accumulated PCBs.	Regulatory criterion for PCBs (1 mg/kg) as applied to other sediment sites.	Several discrete samples exceed criterion. Mean concentration is less than criterion.
Aquatic life may be exposed to water impacted with chemicals from the sediments.	Sediment criteria to protect surface water	All sediment data less than criteria.
Aquatic life may be exposed by dermal contact with sediments and ingestion of contaminated sediment or food.	Aquatic life PEC quotients.	Some sample locations exceed criteria and may be toxic to bottom-dwelling organisms.

Section 3.0 presents the sampling and analytical methods used for the sediment investigations. A total of 151 sediment samples were collected from the Red Cedar River between I-96 freeway on the south (upstream of site) and Gregory Road located north and downstream of the site. Most of the samples were collected between the railroad bridge next to the south boundary of the site and the Grand River Avenue bridge over the river to the north of the site. Of these, 53 were collected and analyzed as part of the RFI and 98 were collected and analyzed by Earth Tech/Weston. The Earth Tech/Weston samples were collected from two depths at most locations and three depths at a few locations. A dense layer of fine sand underneath less-consolidated sediments limits the vertical extent of impact. The Earth Tech/Weston samples were analyzed for chemicals potentially associated with the site using EPA-approved laboratory methods.

The area near transect A is impacted with VOCs, PNAs, and certain metals (in relation to the aquatic life criteria). Samples from transect B, which is just downstream of transect A, met all criteria.

Samples collected from the area near transects C, D and E had the highest concentrations of chemicals and the highest potential to be toxic to aquatic life, based on the PEC quotients. This area was defined by transects B and F in which no samples exceeded criteria for protection of aquatic life. All of the concentrations of PCBs above the 1 mg/kg criterion occurred in this area. This is the area where the former outfalls were located.

Transect F was not impacted, but several samples in transect G, H, and I were, as well as RFI samples from the area of Transects G, H and I did have concentrations of some chemicals above the screening criteria. Concentrations of VOCs, PNAs, PCBs and metals were generally lower than upstream locations. The maximum detected concentration of hexavalent chromium was detected at Transect I. Concentrations downstream of Transect I are generally lower than upstream locations and the PEC quotients are also lower. The PEC quotient criterion was exceeded by one sample in each of the transects (J, K, L and M). The chemicals most responsible for the exceedances are arsenic, chromium, copper, lead, nickel and zinc. The downstream limit of this general area is defined approximately by samples the samples closest to the bridge (SE/RC-20/1, SE/RC-8/1 and SE/RC-8/2), in which the PEC quotients were less than the criterion.

Some samples collected during the RFI downstream of Grand River Avenue had concentrations of some PNAs and metals above the PEC quotient screening criteria. These locations are downstream of a large ditch that flows into the river between Grand River Avenue and the municipal wastewater treatment ponds and are separated from the site by a number of samples that met all criteria. This suggests this ditch is the source of impacts to the sediments in these downstream samples rather than the former Stanley Tools site.

Recommendations for additional sediment investigations are presented in the Section 5.3.

5.2 CONCLUSIONS

1. The potentially complete human health exposure pathways for which applicable criteria are not exceeded are: direct contact, incidental ingestion, protection of surface water and protection of ambient air.

2. The potentially complete exposure pathway for which applicable criteria are exceeded is: protection of aquatic life.

3. The risk-based sediment criterion for PCBs is 7.68 mg/kg. Sediment PCB concentrations exceeded this criterion at only two locations. The average sediment PCB concentration was much less than this criterion. The fish bioaccumulation pathway is not significant because the sediment quality overall meets the site-specific PCB criterion for protection of human health.

4. PCBs were not detected in the floodplain soil samples collected on the west side of the river, opposite the plant site.

5. The SWAC of all chemicals, including PCBs in the 2003 investigation area (between the railroad bridge at the south side of the site and the Grand River Avenue Bridge north of the site) are all less than PEC criteria for protection of aquatic life.

6. The SWAC of PCBs in the combined RFI and 2003 investigation areas (between the railroad bridge at the south side of the site and Gregory Road approximately 2 miles north of the site) was less than the 7.68 mg/kg risk-based criterion and the 1 mg/kg regulatory criterion.

7. The point-by-point sediment comparisons identify areas of the river near the site that need further evaluation.

8. There is evidence that impacts to sediments near the municipal wastewater lagoons is not related to the site but originates from another source.

9. The unconsolidated sediments are approximately 2 feet deep in most areas and are underlain by a dense layer of silt and sand that is visually distinct from the unconsolidated sediments.

5.3 RECOMMENDATIONS

1. Earth Tech/Weston recommends development of site-specific aquatic life protection criteria based on sediment toxicity tests and benthic macro-invertebrate studies. Such criteria may be necessary to better define impacted areas where sediment concentrations are in the "gray area" between the TEC and PEC. Such criteria would be developed based on standard acute sediment toxicity testing of sediments with a range of concentrations and standard methods for macro-invertebrate surveys.

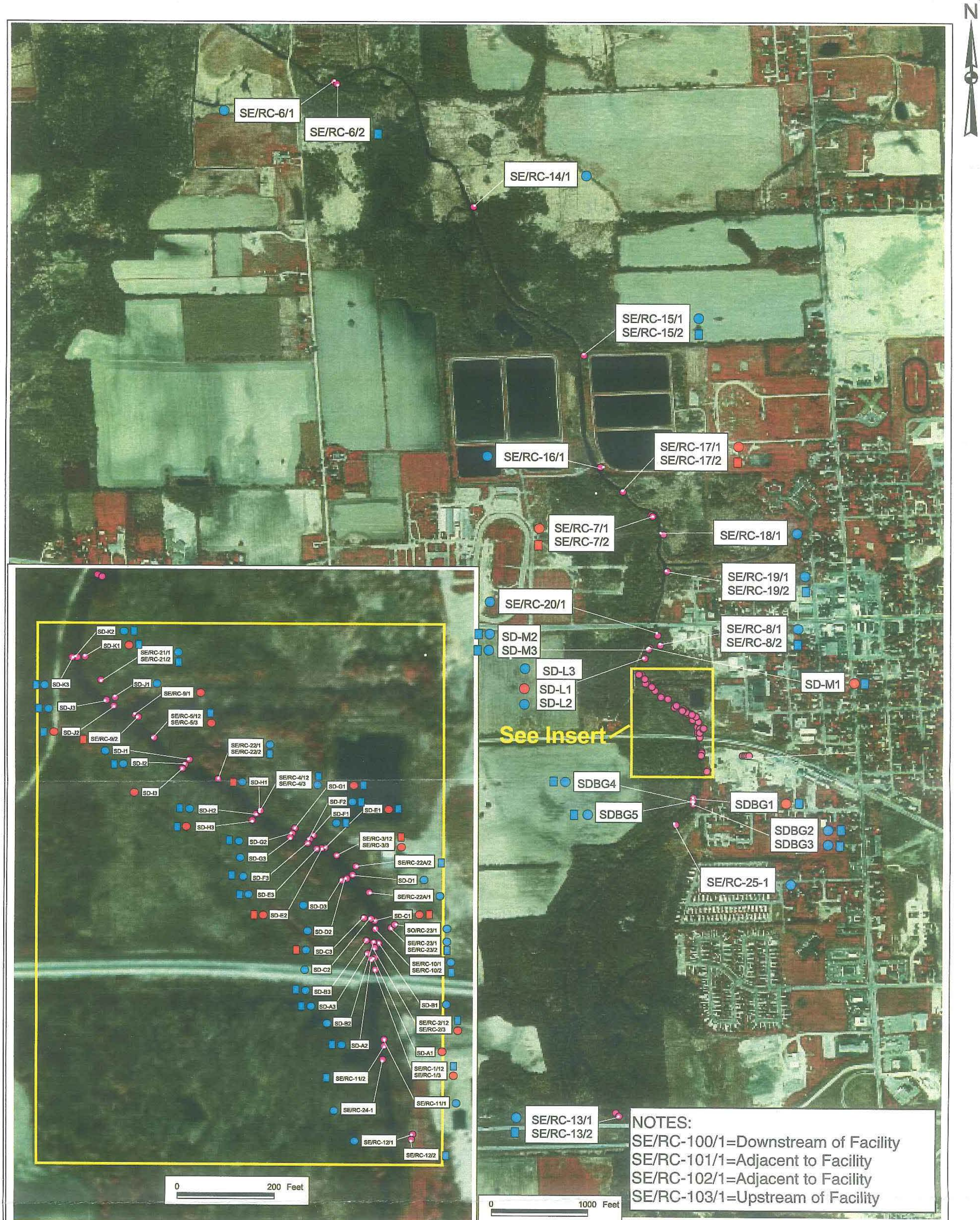
2. Some metals form insoluble precipitates with sulfides and these metals are not biologically available if there is sufficient sulfide present in the sediment. Acid volatile sulfide/simultaneously extracted metal (AVS/SEM) analyses may be useful in developing site-specific sediment quality criteria for these metals (cadmium, copper, lead, nickel and zinc).

3. More bulk sampling may be appropriate to better define impacted areas. This sampling should be done only after development of site-specific criteria.

4. The Surface Area Weighted Average Concentrations (SWACs) should be used for future evaluations of sediment conditions. Such evaluations may include stream reaches where there are only a few point-by-point exceedances of criteria, stream reaches where remediation may be impractical or may have adverse effects on other resources, or to demonstrate attainment of cleanup objectives after remediation.

5. The MDEQ has regulatory authority over impacted sediments and usually evaluates impacted sediments on a case-by-case basis. The MDEQ should be involved in future decisions regarding evaluation/potential remediation of the sediments.

FIGURES



WESTON SOLUTIONS

Johnson Controls, Inc.
Fowlerville

DRAWING TITLE:

PEC Quotient Summary

Weston Solutions, Inc.
750 E. Bunker Ct. Ste. 500
Vernon Hills, IL 60061-1450
TEL: 847-918-4000 -- FAX: 847-918-4050

LEGEND:

- > Mean PEC Quotient
- < Mean PEC Quotient
- Surface Sediment Sample
- Subsurface Sediment Sample

WORK ORDER No.:	PROJECT MANAGER.:
DRAWN BY: NJK	CHECKED BY:
DRAWING NAME:	DIRECTORY:
CONTRACT No.:	DELIVERY No.:
SCALE:	REPORT DATE:
DATE: 12-01-03	REVISION No: FIGURE No.: 1

TABLES

Table 1
Summary of Cleanup Criteria for Sediments

JCI-Flowerville
(mg/kg)

Chemicals	Background	Direct Contact and Ingestion	Ambient Air Protection	Threshold Effect Concentration	Probable Effect Concentration
Phenanthrene	240	-	160	204	1,170
PNAs, Total	-	-	-	1,610	1,520
Pyrene	518	30,967.190	650,000	195	1,520
sec-Butylbenzene	-	7,311.699	ID	NL	NL
Selenium, Total	2.32	8,752.158	130,000	NL	NL
Silver, Total	1	8,752.158	6,700	NL	NL
Styrene	13	36,558.490	970	NL	NL
Toluene	3.2	36,558.490	2,800	NL	NL
trans-1,2-Dichloroethylene	-	3,655.849		NL	NL
Trichloroethene	11	31.989	78	NL	NL
Zinc, Total	110	525,129.500	-	121	459

- means that the criteria was not available
1. See Appendix B
2. See Appendix C
3. Part 201, Rule 299.5746
4. Part 201, Rule 299.5746

5. Development and evaluation of Consensus-Board Sediment Quality Guidelines for Freshwater ecosystems. D.D. MacDonald, C.G. Inersoll, and T.A. Berger. Archives of Environmental Contamination and Toxicology 39, 2-31. 2000

Table 1
Summary of Cleanup Criteria for Sediments

JCI-Flowerville
(mg/kg)

Chemicals	Background	Direct Contact and Ingestion	Ambient Air Protection	Threshold Effect Concentration	Probable Effect Concentration
1,1-Dichloroethane	5.8	18,279.250	2,100	NL	NL
1,2,4-Trimethylbenzene	24	9,139.623	21,000	NL	NL
1,2-Benzphenanthracene	-	8,707.334	-	166	1,290
1,2-Dichloroethene	81	3,655.849	-	NL	NL
4-Isopropyl toluene	23	-	-	NL	NL
Acetone	761	18,279.250	17,000,000	NL	NL
Acrolein	5.2	3,655.849	0	NL	NL
Aluminum, Total	5810	1,750,432.000	-	NL	NL
Anthracene	-	200,549.500	1,400,000	57.2	845
Arsenic, Total	36.6	70.748	720	9.79	33
Barium, Total	163	122,530.200	330,000	NL	NL
Benz(a)anthracene	303	87.073	-	108	1,050
Benzo(a)pyrene	332	8.707	1,500	150	1,450
Benzo(b)fluoranthene	307	87.073	ID	NL	NL
Benzo(g,h,I)perylene	160	-	800,000	NL	NL
Benzo(k)fluoranthene	270	870.733	-	NL	NL
Benzoic acid	320	2,673,993.000	-	NL	NL
bis(2-Ethylhexyl)phthalate	110	5,161.199	700,000	NL	NL
Cadmium, Total	1.85	940.663	1,700	0.99	4.98
Chloroform	22	1,827.925	45	NL	NL
Chloromethane	49.5	984.267	40	NL	NL
Chromium (IV)	-	5,251.295	260	NL	NL
Chromium, Total	15.4	2,625,647.000	-	43.4	111
Chrysene	350	8,707.334	ID	166	1,290
cis-1,2-Dichloroethene	-	1,827.925	-	NL	NL
Copper, Total	25.9	70,017.260	130,000	31.6	149
Cyanide, Total	0.87	18,970.890	-	NL	NL
Cyanide, Free	-	18,970.890	250	NL	NL
Dibenz(a,h)anthroacene	-	-	-	33	NL
Dimethyl phthalate	-	6,684,982.000	3,000,000	NL	NL
Di-N-Butyl phthalate	220	66,849.820	3,000,000	NL	NL
Fluoranthene	631	41,289.590	740,000	423	2,230
Fluorene	-	26,739.930	130,000	77.4	536
Indeno(1,2,3-cd)pyrene	160	87.073	-	NL	NL
Lead, Total	21.6	-	100,000	35.8	128
Mean PEC Quotient	-	-	-	NL	0.5
Mean TEC Quotient	-	-	-	0.5	NL
Mercury, Total	0.147	525.130	52	0.18	1.06
Methyl ethyl ketone	517	109,675.500	-	NL	NL
Naphthalene	-	3,655.849	300	176	561
Naphthalene	78.7	3,655.849	300	176	561
n-Butylbenzene	27	7,311.699	ID	NL	NL
Nickel, Total	15.5	35,008.630	13,000	22.7	48.6
PCB, Total	-	-	-	59.8	676

Table 2

Summary of Sediment Data Exceeding Screening Criteria for Protection of Aquatic Life

JCI - FOWLERVILLE

PEC Quot. >0.5
has hit > PEC
all hits < PEC

Location	FieldID	Depth	1,2,4-Trimethyl benzene	1,2-Dichloro ethene	Acetone	cis-1,2-Dichloro ethene	Methyl ethyl ketone	Naphth alene	sec-Butyl benzene	Toluene	trans-1,2-Dichloro ethylene	Trichloro ethene	1,2-Benzphen anthracene	Anthracene	Benz(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(g,h,i) perylene	Benzo(k) fluor anthene	bis(2-Ethylhexyl)p hthalate
		Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
		Background:	24	81	761	81	517	78.7	27	3.2	81	11	350	NL	303	332	307	160	270	110
		PEC:	NL	NL	NL	NL	NL	561	NL	NL	NL	NL	1,290	845	1,050	1,450	NL	NL	NL	NL
		TEC:	NL	NL	NL	NL	NL	176	NL	NL	NL	NL	166	57.2	108	150	NL	NL	NL	NL
SD-A1	SDA1012-042303-01	0 - 12	27 JB	---	---	---	---	---	---	---	---	---	---	---	160 J	---	---	---	---	240 J
SD-A2	SDA2012-042303-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	---	310 J	160 J	---	---	---	---
SD-A2	SDA2012-042303-02	0 - 12	---	---	---	240	---	---	---	25 J	---	---	---	---	---	---	---	---	---	---
SD-A2	SDA21224-042303-01	12 - 24	---	---	---	1100	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-A3	SDA3012-042303-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-A3	SDA31224-042303-01	12 - 24	---	---	---	1100	---	---	---	---	---	41 JB	---	---	---	---	---	---	---	---
SD-B1	SDB1-0016- 101703-01	0 - 16	---	---	---	2000	620 J	---	---	---	160	---	---	---	---	---	---	---	---	---
SD-B2	SDB2-0016- 101703-01	0 - 16	---	---	---	160	---	290 J	---	8.5 J	---	80	---	110 J	250 J	170 J	---	---	---	---
SD-B3	SDB3-0012- 101703-01	0 - 12	---	---	1100 J	---	850 J	---	---	---	---	---	---	---	200 J	240 J	---	190 J	---	---
SD-B3	SDB3-1228- 101703-01	12 - 28	---	---	---	130	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-B3	SDB3-1228- 101703-02	12 - 28	---	---	---	160	---	---	---	9.6 J	---	---	---	---	---	---	---	---	---	---
SD-B3	SDB3-3642- 101703-01	36 - 42	---	---	---	120	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-C1	SDC1012-042203-01	0 - 12	---	---	---	1100	---	---	---	18 J	100	410	---	---	---	---	---	---	---	---
SD-C1	SDC11224-042203-01	12 - 24	28 JB	---	---	710	---	---	---	---	88	690	---	---	---	---	---	---	---	---
SD-C3	SDC3012-042203-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-C3	SDC31224-042203-01	12 - 24	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-C3	SDC31224-042203-02	12 - 24	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-C2	SDC2-0013- 101703-01	0 - 13	---	---	---	---	570 J	---	---	7.6 J	---	---	---	140 J	280 J	260 J	---	170 J	---	---
SD-C3	SDC3-4248- 101703-01	42 - 48	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-D1	SDD1-0006- 101603-01	0 - 6	---	---	---	---	670	---	---	8.7 J	---	---	---	---	---	---	---	---	---	---
SD-D2	SDD2-0007- 101603-01	0 - 7	---	---	---	420	610 J	---	---	13 J	---	---	---	---	---	---	---	---	---	---
SD-D3	SDD3-0012- 101603-01	0 - 12	---	---	---	---	620 J	---	---	19 J	---	---	---	---	180 J	160 J	---	---	---	---
SD-E1	SDE1012-042203-01	0 - 12	---	---	---	---	---	---	---	25 J	---	42 JB	---	300 J	850	630	610	330	470	890
SD-E1	SDE11224-042203-01	12 - 24	---	---	---	---	---	---	---	10 J	---	27 JB	---	91 J	300 J	230 J	---	---	---	---
SD-E2	SDE2012-042203-01	0 - 12	---	---	---	---	---	---	58 J	25 J	---	42 J	---	---	---	---	---	---	---	---
SD-E2	SDE21224-042203-01	12 - 24	---	---	---	---	---	---	---	15 J	---	59 JB	---	370	1100	830	900	320 J	520	2800
SD-E3	SDE3012-042203-01	0 - 12	---	---	---	---	---	---	33 J	---	---	---	---	---	---	---	---	---	---	---
SD-E3	SDE31224-042203-01	12 - 24	---	---	---	---	---	---	---	---	---	25 JB	---	---	---	---	---	---	---	---
SD-F1	SDF1-0012- 101603-01	0 - 12	---	---	---	---	---	---	---	14 J	---	---	---	---	---	---	---	---	---	---
SD-F1	SDF1-1224- 101603-01	12 - 24	---	---	---	---	550	---	---	12 J	---	---	---	---	---	---	---	---	---	---
SD-F2	SDF2-0012- 101603-01	0 - 12	---	---	---	---	530 J	---	---	19 J	---	---	---	---	---	---	---	---	---	---
SD-F2	SDF2-1226- 101603-01	12 - 26	---	---	---	---	---	---	---	10 J	---	---	---	---	---	---	---	---	---	---
SD-F3	SDF3-0012- 101603-01	0 - 12	---	---	---	---	900	---	---	11 J	---	---	---	---	---	---	---	---	---	---
SD-F3	SDF3-1222- 101603-01	12 - 22	---	---	---	---	---	---	---	10 J	---	---	---	---	---	---	---	---	---	---
SD-G1	SDG1-0012- 101603-01	0 - 12	---	---	---	---	710 J	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-G1	SDG1-1228- 101603-01	12 - 28	---	---	---	---	530 J	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-G1	SDG1-1228- 101603-02	12 - 28	---	---	---	---	---	---	---	8.7 J	---	---	---	---	---	---	---	---	---	---
SD-G2	SDG2-0012- 101603-01	0 - 12	---	---	---	---	---	---	---	9.5 J	---	---	---	64 J	180 J	180 J	---	---	---	---
SD-G2	SDG2-1227- 101603-01	12 - 27	---	---	820	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-G2	SDG2-1227- 101603-02	12 - 27	---	---	---	---	560 J	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-G3	SDG3-0014- 101603-01	0 - 14	---	---	---	---	640 J	---	---	7.9 J	---	---	---	---	---	---	---	---	---	---
SD-H1	SDHI-0012- 101603-01	0 - 12	68 J	---	---	---	---	---	---	11 J	---	---	---	---	---	---	---	---	---	---
SD-H1	SDHI-1224- 101603-01	12 - 0	---	---	880	---	600 J	---	---	---	---	---	---	---	---	---	---	---	---	260 J
SD-H1	SDHI-2436- 101603-01	24 - 36	---	---	---	---	600	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-H2	SDH2-0012- 101603-01	0 - 12	---	---	---	360	580 J	---	---	12 J	---	---	---	---	---	---	---	---	---	---
SD-H2	SDH2-1224- 101603-01	12 - 0	---	---	---	---	710	---	---	140	---	---	---	---	---	---	---	---	---	200 J
SD-H2	SDH2-2445- 101603-02	24 - 45	---	---	---	---	---	---	---	11 J	---	---	---	---	---	---	---	---	---	---
SD-H3	SDH3-0012- 101603-01	0 - 12	---	---	---	---	620 J	---	---	12 J	---	---	---	---	---	---	---	---	---	---

Table 2

Summary of Sediment Data Exceeding Screening Criteria for Protection of Aquatic Life

JCI - FOWLERVILLE

Location	FieldID	Depth	1,2,4-Trimethyl benzene	1,2-Dichloro ethene	Acetone	cis-1,2-Dichloro ethene	Methyl ethyl ketone	Naphth alene	sec-Butyl benzene	Toluene	trans-1,2-Dichloro ethylene	Trichloro ethene	1,2-Benzphen anthracene	Anthracene	Benz(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(g,h,i) perylene	Benzo(k) fluor anthene	bis(2-Ethylhexyl)p hthalate
	PEC Quot. >0.5	Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
	has hit > PEC	Background:	24	81	761	81	517	78.7	27	3.2	81	11	350	NL	303	332	307	160	270	110
	all hits < PEC	PEC:	NL	NL	NL	NL	NL	561	NL	NL	NL	NL	1,290	845	1,050	1,450	NL	NL	NL	NL
		TEC:	NL	NL	NL	NL	NL	176	NL	NL	NL	NL	166	57.2	108	150	NL	NL	NL	NL
SD-H3	SDH3-1221- 101603-01	12 - 21	---	---	---	---	590	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-I1	SDI1-0012- 101503-01	0 - 12	---	---	---	---	---	---	---	13 J	---	---	---	---	---	---	---	---	---	---
SD-I1	SDI1-1224- 101503-01	12 - 0	---	---	---	---	---	---	---	8.1 J	---	---	---	---	---	---	---	---	---	---
SD-I1	SDI1-2445- 101503-01	24 - 45	---	---	---	---	---	---	---	6.7 J	---	---	---	---	---	---	---	---	---	---
SD-I1	SDI1-2445- 101503-02	24 - 45	---	---	---	---	---	---	---	5.8 J	---	---	---	---	---	---	---	---	---	---
SD-I2	SDI2-0012- 101503-01	0 - 12	---	---	---	---	---	---	---	14 J	---	---	---	---	---	---	---	---	---	---
SD-I2	SDI2-1224- 101503-01	12 - 0	---	---	---	---	---	---	---	6 J	---	---	---	---	---	---	---	---	---	---
SD-I3	SDI3-0012- 101503-01	0 - 12	---	---	---	---	640 J	---	---	16 J	---	---	---	---	---	---	---	---	---	---
SD-J1	SDJ1012-042203-01	0 - 12	---	---	---	---	---	---	---	---	---	48 JB	---	---	---	---	---	---	---	---
SD-J2	SDJ2-0012- 101503-01	0 - 12	---	---	---	---	---	---	---	11 J	---	---	---	---	---	---	---	---	---	---
SD-J2	SDJ2-1224- 101503-01	12 - 0	---	---	---	---	---	---	---	15 J	---	---	---	---	---	---	---	---	---	---
SD-J3	SDJ3012-042203-01	0 - 12	---	---	---	---	---	---	---	---	---	54 JB	---	---	---	---	---	---	---	---
SD-J3	SDJ31224-042203-01	12 - 24	---	---	---	---	---	---	---	---	---	37 JB	---	---	---	---	---	---	---	---
SD-K1	SDK1-0012- 101503-01	0 - 12	---	---	---	---	690 J	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-K1	SDK1-1224- 101503-01	12 - 0	---	---	---	---	570 J	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-K2	SDK2-1224- 101503-01	12 - 0	---	---	---	---	---	---	---	18 J	---	---	---	---	---	---	---	---	---	---
SD-K3	SDK3-0012- 101503-01	0 - 12	---	---	---	---	620 J	---	---	17 J	---	---	---	---	---	---	---	---	---	---
SD-K3	SDK3-1224- 101503-01	12 - 0	---	---	---	---	---	---	---	8.8 J	---	---	---	---	---	---	---	---	---	---
SD-L1	SDL1012 052003-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	93 J	370 J	300 J	420 J	200 J	---	---
SD-L1	SDL1012 052003-02	0 - 12	---	---	---	---	---	---	---	---	---	---	---	---	190 J	170 J	---	---	---	---
SD-L2	SDL2012 052003-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-L3	SDL3012 052003-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-M1	SDM1012 052003-01	0.- 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-M1	SDM11224 052003-01	12 - 24	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-M2	SDM2012 052003-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-M2	SDM21224 052003-01	12 - 24	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-M3	SDM3012 052003-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-M3	SDM31224 052003-01	12 - 24	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-BG1	SDBG1012-041803-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-BG1	SDBG11224-041803-01	12 - 24	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-BG4	SDBG4012-042103-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-BG4	SDBG41224-042103-01	12 - 24	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-BG5	SDBG5012-042103-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	---	120 J	---	---	---	---	---
SE/RC-1/3	SE/RC-1/3	0 - 3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	600 J	---	---	700 J
SE/RC-1/12	SE/RC-1/12	6 - 12	---	---	---	---	---	---	---	---	---	75	---	---	---	---	390 J	---	---	230 J
SE/RC-2/3	SE/RC-2/3	0 - 3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2000 J
SE/RC-2/12	SE/RC-2/12	6 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2000
SE/RC-3/3	SE/RC-3/3	0 - 3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2000 J
SE/RC-3/12	SE/RC-3/12	6 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	4000 J
SE/RC-3/12	SE/RC-6/12	6 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	5200
SE/RC-4/3	SE/RC-4/3	0 - 3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2000
SE/RC-4/12	SE/RC-4/12	6 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2000
SE/RC-5/3	SE/RC-5/3	0 - 3	---	---	---	---	---	---	---	---	---	---	---	---	130 J	---	---	---	---	1000
SE/RC-5/12	SE/RC-5/12	6 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SE/RC-6/1	SE/RC-6/1	6 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SE/RC-7/1	SE/RC-7/1	0 - 3	---	---	---	---	---	---	---	---	---	---	---	130 J	420 J	380 J	690	250 J	---	1100
SE/RC-7/2	SE/RC-7/2	6 - 12	---	---	---	---	---	---	---	---	---	---	---	---	510 J	570 J	850 J	390 J	---	5800
SE/RC-8/1	SE/RC-8/1	0 - 3	---	---	---	---	---	---	---	---	---	---	---	---	290 J	360 J	590 J	230 J	---	410 J

Table 2

Summary of Sediment Data Exceeding Screening Criteria for Protection of Aquatic Life

JCI - FOWLERVILLE

PEC Quot. >0.5
has hit > PEC
all hits < PEC

Location	FieldID	Depth	1,2,4-Trimethyl benzene	1,2-Dichloro ethene	Acetone	cis-1,2-Dichloro ethene	Methyl ethyl ketone	Naphth alene	sec-Butyl benzene	Toluene	trans-1,2-Dichloro ethylene	Trichloro ethene	1,2-Benzphen anthracene	Anthracene	Benz(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(g,h,i) perylene	Benzo(k) fluor anthene	bis(2-Ethylhexyl)p hthalate
		Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
		Background:	24	81	761	81	517	78.7	27	3.2	81	11	350	NL	303	332	307	160	270	110
		PEC:	NL	NL	NL	NL	NL	561	NL	NL	NL	NL	1,290	845	1,050	1,450	NL	NL	NL	NL
		TEC:	NL	NL	NL	NL	NL	176	NL	NL	NL	NL	166	57.2	108	150	NL	NL	NL	NL
SE/RC-8/2	SE/RC-8/2	6 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SE/RC-9/1	SE/RC-9/1	0 - 3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	760
SE/RC-9/2	SE/RC-9/2	6 - 12	---	---	---	---	---	---	---	17	---	---	---	---	---	---	---	---	---	4900
SE/RC-10/1	SE/RC-10/1	0 - 3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SE/RC-10/2	SE/RC-10/2	6 - 12	---	110	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SE/RC-11/1	SE/RC-11/1	0 - 3	---	---	---	---	---	---	---	---	---	---	---	67 J	230 J	260 J	---	---	---	---
SE/RC-11/2	SE/RC-11/2	6 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SE/RC-12/1	SE/RC-12/1	0 - 3	---	---	---	---	---	---	---	---	---	---	---	---	---	220 J	---	---	---	---
SE/RC-13/2	SE/RC-13/2	6 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SE/RC-13/2	SE/RC-13/2 Dup	6 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SE/RC-15/1	SRC-15/136787	0 - 0	---	---	---	---	---	---	---	---	---	---	170 J	---	140 J	---	---	---	---	---
SE/RC-15/2	SRC-15/236787	0 - 0	---	---	---	---	---	---	---	---	---	---	---	---	120 J	---	---	---	---	---
SE/RC-16/1	SRC-16/136787	0 - 0	---	---	---	---	---	---	---	---	---	---	220 J	---	190 J	200 J	---	---	---	---
SE/RC-17/1	SRC-17/136787	0 - 0	---	---	---	---	---	---	---	---	---	---	280 J	---	190 J	210 J	---	---	---	---
SE/RC-17/2	SRC-17/236787	0 - 0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SE/RC-18/1	SRC-18/136787	0 - 0	---	---	---	---	---	---	---	---	---	---	190 J	---	150 J	---	---	---	---	---
SE/RC-19/1	SRC-19/136787	0 - 0	---	---	---	---	---	---	---	---	---	---	410 J	130 J	370 J	340 J	340 J	170 J	---	---
SE/RC-19/2	SRC-19/236787	0 - 0	---	---	---	---	---	---	---	---	---	---	310 J	84 J	260 J	260 J	---	170 J	---	---
SE/RC-21/1	SRC-21/136787	0 - 0	---	---	---	---	---	---	---	---	---	---	---	---	110 J	---	---	---	---	---
SE/RC-22A/1	SRC-22A/136787	0 - 0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SE/RC-22A/2	SRC-22A/236787	0 - 0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SE/RC-23/1	SRC-23/1 DEP36787	0 - 0	---	---	---	---	---	---	---	---	---	---	280 J	---	170 J	210 J	---	---	---	---
SE/RC-24-1	SRC-24/136787	0 - 0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SE/RC-100/1	SE/RC-100/1	0 - 3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SE/RC-101/1	SE/RC-101/1	0 - 3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SE/RC-103/1	SE/RC-103/1	0 - 3	---	---	---	---	---	---	---	---	---	---	---	---	120 J	---	---	---	---	---

Table 2

Summary of Sediment Data Exceeding Screening Criteria for Protection of Aquatic Life

JCI - FOWLERVILLE

Location	FieldID	Depth	Chrysene	Di-N-Butyl phthalate	Dibenz(a,h) anthracene	Fluor anthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphth alene	Phen anthrene	Pyrene	PNAs, Total	PCB, Total	Arsenic, Total	Barium, Total	Cadmium, Total	Chromium (VI)	Chromium, Total	Copper, Total	Lead, Total
	PEC Quot. >0.5	Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	has hit > PEC	Background:	350	220	NL	631	NL	160	78.7	240	518	NL	NL	36.6	163	1.85	15.4	15.4	25.9	21.6
	all hits < PEC	PEC:	1,290	NL	NL	2,230	536	NL	561	1,170	1,520	22,800	676	33	NL	4.98	NL	111	149	128
		TEC:	166	NL	33	423	77.4	NL	176	204	195	1,610	59.8	9.79	NL	0.99	NL	43.4	31.6	35.8
SD-A1	SDA1012-042303-01	0 - 12	250 J	---	---	460	---	---	---	---	380	1776	---	---	---	---	---	97	85	26
SD-A2	SDA2012-042303-01	0 - 12	180 J	---	---	610	---	---	---	---	550	2451	---	---	---	---	---	23	---	---
SD-A2	SDA2012-042303-02	0 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	25	---	45
SD-A2	SDA21224-042303-01	12 - 24	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-A3	SDA3012-042303-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	20	29	---
SD-A3	SDA31224-042303-01	12 - 24	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-B1	SDB1-0016- 101703-01	0 - 16	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	27	---	---
SD-B2	SDB2-0016- 101703-01	0 - 16	240 J	---	48 J	550	160 J	---	170 J	330	510	3045	67 J	---	---	---	---	54	32	---
SD-B3	SDB3-0012- 101703-01	0 - 12	280 J	---	72 J	620	---	---	---	---	450	2759	---	15	---	---	---	---	---	---
SD-B3	SDB3-1228- 101703-01	12 - 28	---	---	---	---	---	---	---	---	---	---	---	14	---	---	---	---	---	---
SD-B3	SDB3-1228- 101703-02	12 - 28	---	---	---	---	---	---	---	---	---	---	---	10	---	---	---	---	---	---
SD-B3	SDB3-3642- 101703-01	36 - 42	---	---	---	---	---	---	---	---	---	---	---	14	---	---	---	---	---	---
SD-C1	SDC1012-042203-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-C1	SDC11224-042203-01	12 - 24	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-C3	SDC3012-042203-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	27
SD-C3	SDC31224-042203-01	12 - 24	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	18	---	---
SD-C3	SDC31224-042203-02	12 - 24	---	---	---	---	---	---	---	---	---	---	---	14	---	---	---	17	---	---
SD-C2	SDC2-0013- 101703-01	0 - 13	310 J	---	42 J	640	---	170 J	---	400	490	3468	---	---	---	---	---	---	---	---
SD-C3	SDC3-4248- 101703-01	42 - 48	---	---	---	---	---	---	---	---	---	---	---	17	---	---	---	---	39	---
SD-D1	SDD1-0006- 101603-01	0 - 6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-D2	SDD2-0007- 101603-01	0 - 7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	27	---	---
SD-D3	SDD3-0012- 101603-01	0 - 12	---	---	---	430	---	---	---	---	320 J	2065.5	---	---	---	---	---	---	---	---
SD-E1	SDE1012-042203-01	0 - 12	630	---	---	1700	220 J	350	---	1000	1500	8590	9180 J	19	---	---	---	181	230	51
SD-E1	SDE11224-042203-01	12 - 24	310 J	---	---	660	---	---	---	380	600	3282	---	---	---	---	---	---	---	---
SD-E2	SDE2012-042203-01	0 - 12	---	---	---	---	---	---	---	240 J	360	1890	560 J	18	---	---	---	1760	1370	34
SD-E2	SDE21224-042203-01	12 - 24	890	---	---	2600	360	300 J	---	1300	2300	12200	4900	11	---	1.3	---	396	513	97
SD-E3	SDE3012-042203-01	0 - 12	---	---	---	---	---	---	---	---	---	---	262 J	---	---	---	---	29	---	---
SD-E3	SDE31224-042203-01	12 - 24	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-F1	SDF1-0012- 101603-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-F1	SDF1-1224- 101603-01	12 - 24	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-F2	SDF2-0012- 101603-01	0 - 12	---	---	---	---	---	---	---	---	---	---	320 J	---	---	---	---	---	---	---
SD-F2	SDF2-1226- 101603-01	12 - 26	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-F3	SDF3-0012- 101603-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	58	36	---
SD-F3	SDF3-1222- 101603-01	12 - 22	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-G1	SDG1-0012- 101603-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	65	---	---	---	16	---	---
SD-G1	SDG1-1228- 101603-01	12 - 28	---	---	---	---	---	---	---	---	---	---	---	21	---	---	---	---	---	---
SD-G1	SDG1-1228- 101603-02	12 - 28	---	---	---	---	---	---	---	---	---	---	---	22	---	---	---	---	---	---
SD-G2	SDG2-0012- 101603-01	0 - 12	180 J	---	40 J	470	---	---	---	370	420	2389.7	---	12	---	---	---	---	---	---
SD-G2	SDG2-1227- 101603-01	12 - 27	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-G2	SDG2-1227- 101603-02	12 - 27	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-G3	SDG3-0014- 101603-01	0 - 14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	16	---	---
SD-H1	SDHI-0012- 101603-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	10	---	---	---	41	33	22
SD-H1	SDHI-1224- 101603-01	12 - 0	---	---	---	---	---	---	---	---	---	---	67 J	---	---	---	---	771	563	---
SD-H1	SDHI-2436- 101603-01	24 - 36	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-H2	SDH2-0012- 101603-01	0 - 12	---	---	---	---	---	---	---	---	---	---	180 J	---	---	---	---	16	---	---
SD-H2	SDH2-1224- 101603-01	12 - 0	---	---	---	---	---	---	---	---	---	---	120 J	---	---	---	---	99	61	---
SD-H2	SDH2-2445- 101603-02	24 - 45	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-H3	SDH3-0012- 101603-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	11	---	---	---	71	63	---

Table 2

Summary of Sediment Data Exceeding Screening Criteria for Protection of Aquatic Life

JCI - FOWLERVILLE

PEC Quot. >0.5
has hit > PEC
all hits < PEC

Location	FieldID	Depth	Chrysene	Di-N-Butyl phthalate	Dibenz(a,h) anthracene	Fluor anthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphth alene	Phen anthrene	Pyrene	PNAs, Total	PCB, Total	Arsenic, Total	Barium, Total	Cadmium, Total	Chromium (VI)	Chromium, Total	Copper, Total	Lead, Total
		Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
		Background:	350	220	NL	631	NL	160	78.7	240	518	NL	NL	36.6	163	1.85	15.4	15.4	25.9	21.6
		PEC:	1,290	NL	NL	2,230	536	NL	561	1,170	1,520	22,800	676	33	NL	4.98	NL	111	149	128
		TEC:	166	NL	33	423	77.4	NL	176	204	195	1,610	59.8	9.79	NL	0.99	NL	43.4	31.6	35.8
SD-H3	SDH3-1221- 101603-01	12 - 21	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-I1	SDI1-0012- 101503-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	26	---	---
SD-I1	SDI1-1224- 101503-01	12 - 0	---	---	---	---	---	---	---	---	---	---	---	18	---	---	---	---	---	---
SD-I1	SDI1-2445- 101503-01	24 - 45	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-I1	SDI1-2445- 101503-02	24 - 45	---	---	---	---	---	---	---	---	---	---	---	10	---	---	---	---	---	---
SD-I2	SDI2-0012- 101503-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-I2	SDI2-1224- 101503-01	12 - 0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-I3	SDI3-0012- 101503-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	18	---	---	26	102	82	---
SD-J1	SDJ1012-042203-01	0 - 12	---	---	---	---	---	---	---	---	---	---	126 J	---	---	---	---	40	47	---
SD-J2	SDJ2-0012- 101503-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	74	64	---
SD-J2	SDJ2-1224- 101503-01	12 - 0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	35	26	---
SD-J3	SDJ3012-042203-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	40	34	---
SD-J3	SDJ31224-042203-01	12 - 24	---	---	---	---	---	---	---	---	---	---	---	14	---	---	---	---	---	---
SD-K1	SDK1-0012- 101503-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	13	---	---	---	109	73	---
SD-K1	SDK1-1224- 101503-01	12 - 0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	23	---	---
SD-K2	SDK2-1224- 101503-01	12 - 0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-K3	SDK3-0012- 101503-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-K3	SDK3-1224- 101503-01	12 - 0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-L1	SDL1012 052003-01	0 - 12	350 J	---	---	1000 J	---	---	---	580 J	730 J	4450	---	---	---	---	---	---	---	---
SD-L1	SDL1012 052003-02	0 - 12	180 J	---	---	490 J	---	---	---	240 J	360 J	2168	---	---	---	---	---	---	---	97
SD-L2	SDL2012 052003-01	0 - 12	---	---	---	---	---	---	---	---	200 J	---	---	---	---	---	---	20	---	---
SD-L3	SDL3012 052003-01	0 - 12	---	340 J	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-M1	SDM1012 052003-01	0 - 12	---	440 J	---	---	---	---	---	---	---	---	---	44	---	---	---	17	---	---
SD-M1	SDM11224 052003-01	12 - 24	---	370 J	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-M2	SDM2012 052003-01	0 - 12	---	380 J	---	---	---	---	---	---	---	---	66 J	---	---	---	---	---	---	---
SD-M2	SDM21224 052003-01	12 - 24	---	420 J	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-M3	SDM3012 052003-01	0 - 12	---	260 J	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SD-M3	SDM31224 052003-01	12 - 24	---	310 J	---	---	---	---	---	---	---	---	---	11	---	---	---	---	---	---
SD-BG1	SDBG1012-041803-01	0 - 12	---	---	---	---	---	---	---	---	---	---	---	27	178	1.1	---	---	---	---
SD-BG1	SDBG11224-041803-01	12 - 24	---	---	---	---	---	---	---	---	---	---	---	18	---	---	---	---	---	---
SD-BG4	SDBG4012-042103-01	0 - 12	---	---	---	---	---	---	---	---	200 J	---	---	---	---	---	---	---	---	---
SD-BG4	SDBG41224-042103-01	12 - 24	---	---	---	---	---	---	---	---	---	---	---	11	---	---	---	---	---	---
SD-BG5	SDBG5012-042103-01	0 - 12	---	---	---	---	---	---	---	---	240 J	---	---	---	---	---	---	---	---	---
SE/RC-1/3	SE/RC-1/3	0 - 3	480 J	---	---	---	---	---	---	---	---	---	80 J	38	209	2.5	---	1420	769	64.6
SE/RC-1/12	SE/RC-1/12	6 - 12	220 J	---	---	---	---	---	---	260 J	290 J	---	450	11.6	---	1.9	---	55.7	76.3	46.8
SE/RC-2/3	SE/RC-2/3	0 - 3	---	---	---	---	---	---	---	---	---	---	800	19.7	---	1.3	---	240	227	27.2
SE/RC-2/12	SE/RC-2/12	6 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SE/RC-3/3	SE/RC-3/3	0 - 3	---	---	---	---	---	---	---	---	---	---	---	---	---	1.4	---	74.8	114	---
SE/RC-3/12	SE/RC-3/12	6 - 12	---	---	---	680 J	---	---	---	---	750 J	---	4900 J	---	256	---	---	252	421	---
SE/RC-3/12	SE/RC-6/12	6 - 12	---	---	---	610 J	---	---	---	---	630 J	---	11000	---	184	---	---	448	713	---
SE/RC-4/3	SE/RC-4/3	0 - 3	---	---	---	---	---	---	---	---	---	---	230	---	---	---	---	28.6	---	---
SE/RC-4/12	SE/RC-4/12	6 - 12	---	---	---	---	---	---	---	---	---	---	78	11.7	---	---	---	17.7	---	---
SE/RC-5/3	SE/RC-5/3	0 - 3	230 J	---	---	470 J	---	---	---	230 J	460 J	---	6500	11.3	---	---	---	451	302	32.6
SE/RC-5/12	SE/RC-5/12	6 - 12	---	---	---	---	---	---	---	---	---	---	89	---	---	---	---	---	---	---
SE/RC-6/1	SE/RC-6/1	6 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	19.2	---	---
SE/RC-7/1	SE/RC-7/1	0 - 3	510	---	---	950	---	210 J	---	640	1000	5247	258	---	---	---	---	200	175	---
SE/RC-7/2	SE/RC-7/2	6 - 12	740 J	1100 J	---	1500 J	---	370 J	---	840 J	1100 J	6870	590	11.1	---	---	---	690	622	77.3
SE/RC-8/1	SE/RC-8/1	0 - 3	550 J	---	---	880 J	---	220 J	---	290 J	670 J	4080	130	19.5	187	1.9	---	55.1	69.2	33.8

Table 2

Summary of Sediment Data Exceeding Screening Criteria for Protection of Aquatic Life

JCI - FOWLERVILLE

PEC Quot. >0.5
has hit > PEC
all hits < PEC

Location	FieldID	Depth	Chrysene	Di-N-Butyl phthalate	Dibenz(a,h) anthracene	Fluor anthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphth alene	Phen anthrene	Pyrene	PNAs, Total	PCB, Total	Arsenic, Total	Barium, Total	Cadmium, Total	Chromium (VI)	Chromium, Total	Copper, Total	Lead, Total
		Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
		Background:	350	220	NL	631	NL	160	78.7	240	518	NL	NL	36.6	163	1.85	15.4	15.4	25.9	21.6
		PEC:	1,290	NL	NL	2,230	536	NL	561	1,170	1,520	22,800	676	33	NL	4.98	NL	111	149	128
		TEC:	166	NL	33	423	77.4	NL	176	204	195	1,610	59.8	9.79	NL	0.99	NL	43.4	31.6	35.8
SE/RC-8/2	SE/RC-8/2	6 - 12	---	260 J	---	---	---	---	---	---	280 J	---	87	---	---	---	---	---	---	---
SE/RC-9/1	SE/RC-9/1	0 - 3	---	---	---	---	---	---	---	---	---	---	440	---	---	---	---	170	108	---
SE/RC-9/2	SE/RC-9/2	6 - 12	---	500 J	---	---	---	---	---	---	200 J	---	700	---	---	---	---	558	293	---
SE/RC-10/1	SE/RC-10/1	0 - 3	---	---	---	---	---	---	---	---	---	---	---	18.5	---	1.1	---	---	---	---
SE/RC-10/2	SE/RC-10/2	6 - 12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	27.6	---
SE/RC-11/1	SE/RC-11/1	0 - 3	350 J	---	---	560 J	---	---	---	240 J	430 J	2987	---	13.3	---	2	---	---	---	---
SE/RC-11/2	SE/RC-11/2	6 - 12	---	---	---	---	---	---	---	---	---	---	---	35.8	---	1.1	---	---	---	---
SE/RC-12/1	SE/RC-12/1	0 - 3	---	---	---	---	---	---	---	---	---	---	---	13.7	---	---	---	---	---	---
SE/RC-13/2	SE/RC-13/2	6 - 12	---	---	---	---	---	---	---	---	---	---	---	12.5	---	---	---	---	---	---
SE/RC-13/2	SE/RC-13/2 Dup	6 - 12	---	---	---	---	---	---	---	---	---	---	---	9.9	---	---	---	---	---	---
SE/RC-15/1	SRC-15/136787	0 - 0	---	---	---	---	---	---	---	210 J	260 J	---	---	---	---	---	---	---	---	---
SE/RC-15/2	SRC-15/236787	0 - 0	---	---	---	---	---	---	---	---	210 J	---	---	---	---	---	---	26	---	---
SE/RC-16/1	SRC-16/136787	0 - 0	---	---	---	430 J	---	---	---	280 J	470	2180	---	---	---	---	---	18.1	---	---
SE/RC-17/1	SRC-17/136787	0 - 0	---	---	---	570	---	---	---	430 J	440 J	2450	310	---	---	---	---	404	---	23.3
SE/RC-17/2	SRC-17/236787	0 - 0	---	---	---	---	---	---	---	---	---	---	105 J	10.3	---	---	---	78.5	---	---
SE/RC-18/1	SRC-18/136787	0 - 0	---	---	---	430	---	---	---	330 J	410 J	1959	---	---	---	---	---	---	---	---
SE/RC-19/1	SRC-19/136787	0 - 0	---	---	---	880	85 J	180 J	---	660	850	4275	---	---	---	---	---	---	---	---
SE/RC-19/2	SRC-19/236787	0 - 0	---	---	---	620	---	---	---	310 J	590	2924	67	13.2	---	---	---	45.8	---	---
SE/RC-21/1	SRC-21/136787	0 - 0	---	---	---	---	---	---	---	---	200 J	---	---	---	---	---	---	---	---	---
SE/RC-22A/1	SRC-22A/136787	0 - 0	---	---	---	---	---	---	---	---	---	---	138	---	---	---	---	---	---	---
SE/RC-22A/2	SRC-22A/236787	0 - 0	---	---	---	---	---	---	---	---	---	---	130	---	---	---	---	29.9	---	---
SE/RC-23/1	SRC-23/1 DEP36787	0 - 0	---	---	---	---	---	---	---	---	390 J	1740	---	24.9	200	---	---	29.2	---	---
SE/RC-24-1	SRC-24/136787	0 - 0	---	---	---	---	---	---	---	---	---	---	---	11.1	---	---	---	---	---	---
SE/RC-100/1	SE/RC-100/1	0 - 3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SE/RC-101/1	SE/RC-101/1	0 - 3	---	---	---	---	---	---	---	---	---	---	97	10.3	---	---	---	18	---	---
SE/RC-103/1	SE/RC-103/1	0 - 3	---	---	---	---	---	---	---	---	290 J	---	---	---	---	---	---	---	---	---

Table 2

Summary of Sediment Data Exceeding Screening Criteria for Protection of Aquatic Life

JCI - FOWLERVILLE

			Mercury, Total	Nickel, Total	Selenium, Total	Silver, Total	Zinc, Total	Cyanide, Free	Cyanide, Total	Mean PEC Quotient	Mean TEC Quotient
	PEC Quot. >0.5	Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	NA	NA
	has hit > PEC	Background:	0.147	15.5	2.32	1	110	0.87	0.87	NL	NL
	all hits < PEC	PEC:	1.06	48.6	NL	NL	459	NL	NL	0.5	NL
		TEC:	0.18	22.7	NL	NL	121	NL	NL	NL	0.5
Location	**FieldID**	**Depth**									
SD-A1	SDA1012-042303-01	0 - 12	---	71	---	---	372	---	---	0.78	2.37
SD-A2	SDA2012-042303-01	0 - 12	---	19	---	---	---	---	---	---	1.76
SD-A2	SDA2012-042303-02	0 - 12	---	20	---	---	---	---	---	---	0.90
SD-A2	SDA21224-042303-01	12 - 24	---	---	---	---	---	---	---	---	---
SD-A3	SDA3012-042303-01	0 - 12	---	17	---	---	---	---	---	---	0.71
SD-A3	SDA31224-042303-01	12 - 24	---	---	---	---	---	---	---	---	---
SD-B1	SDB1-0016- 101703-01	0 - 16	---	19	---	---	---	---	---	---	0.73
SD-B2	SDB2-0016- 101703-01	0 - 16	---	24	---	---	174	---	---	---	1.28
SD-B3	SDB3-0012- 101703-01	0 - 12	---	---	---	---	---	---	---	---	---
SD-B3	SDB3-1228- 101703-01	12 - 28	---	---	---	---	---	---	1.6	---	---
SD-B3	SDB3-1228- 101703-02	12 - 28	---	---	---	---	---	---	---	---	---
SD-B3	SDB3-3642- 101703-01	36 - 42	---	---	---	---	---	---	---	---	---
SD-C1	SDC1012-042203-01	0 - 12	---	39	---	---	249	---	---	0.67	1.89
SD-C1	SDC11224-042203-01	12 - 24	---	34	---	---	---	---	---	0.70	1.50
SD-C3	SDC3012-042203-01	0 - 12	---	---	---	---	---	---	---	---	0.75
SD-C3	SDC31224-042203-01	12 - 24	---	18	---	---	---	---	---	---	0.60
SD-C3	SDC31224-042203-02	12 - 24	---	27	---	---	---	---	---	---	0.79
SD-C2	SDC2-0013- 101703-01	0 - 13	---	---	---	---	---	---	---	---	1.74
SD-C3	SDC3-4248- 101703-01	42 - 48	---	40	---	---	---	---	---	0.54	1.50
SD-D1	SDD1-0006- 101603-01	0 - 6	---	---	---	---	---	---	---	---	---
SD-D2	SDD2-0007- 101603-01	0 - 7	---	---	---	---	---	---	1.2	---	0.62
SD-D3	SDD3-0012- 101603-01	0 - 12	---	---	---	---	---	---	---	---	---
SD-E1	SDE1012-042203-01	0 - 12	0.3	87	---	---	289	---	---	0.88	4.44
SD-E1	SDE11224-042203-01	12 - 24	---	---	---	---	---	---	---	---	2.17
SD-E2	SDE2012-042203-01	0 - 12	---	189	---	---	1930	1.3	23	6.68	21.83
SD-E2	SDE21224-042203-01	12 - 24	0.41	165	---	---	721	---	14	1.60	7.41
SD-E3	SDE3012-042203-01	0 - 12	---	---	---	---	---	---	---	---	0.67
SD-E3	SDE31224-042203-01	12 - 24	---	---	---	---	---	---	---	---	---
SD-F1	SDF1-0012- 101603-01	0 - 12	---	---	---	---	---	---	---	---	---
SD-F1	SDF1-1224- 101603-01	12 - 24	---	---	---	---	---	---	---	---	---
SD-F2	SDF2-0012- 101603-01	0 - 12	---	---	---	---	---	---	---	---	1.21
SD-F2	SDF2-1226- 101603-01	12 - 26	---	---	---	---	---	---	---	---	---
SD-F3	SDF3-0012- 101603-01	0 - 12	---	26	---	---	---	---	1.3	---	---
SD-F3	SDF3-1222- 101603-01	12 - 22	---	---	---	---	---	---	---	---	---
SD-G1	SDG1-0012- 101603-01	0 - 12	---	---	---	---	---	---	---	1.06	3.50
SD-G1	SDG1-1228- 101603-01	12 - 28	---	---	---	---	---	---	---	---	---
SD-G1	SDG1-1228- 101603-02	12 - 28	---	---	---	---	---	---	---	---	---
SD-G2	SDG2-0012- 101603-01	0 - 12	---	---	---	---	---	---	---	---	1.81
SD-G2	SDG2-1227- 101603-01	12 - 27	---	---	---	---	---	---	---	---	---
SD-G2	SDG2-1227- 101603-02	12 - 27	---	---	---	---	---	---	---	---	---
SD-G3	SDG3-0014- 101603-01	0 - 14	---	---	---	---	---	---	---	---	---
SD-H1	SDHI-0012- 101603-01	0 - 12	---	26	---	---	---	---	1.4	---	0.94
SD-H1	SDHI-1224- 101603-01	12 - 0	---	150	---	---	784	---	11	0.63	12.17
SD-H1	SDHI-2436- 101603-01	24 - 36	---	---	---	---	---	---	---	---	---
SD-H2	SDH2-0012- 101603-01	0 - 12	---	41	---	---	---	---	---	---	1.09
SD-H2	SDH2-1224- 101603-01	12 - 0	---	40	---	---	178	---	1.4	---	1.86
SD-H2	SDH2-2445- 101603-02	24 - 45	---	---	---	---	---	---	---	---	---
SD-H3	SDH3-0012- 101603-01	0 - 12	---	45	---	---	127	---	---	0.57	1.67

Table 2

Summary of Sediment Data Exceeding Screening Criteria for Protection of Aquatic Life

JCI - FOWLERVILLE

			Mercury, Total	Nickel, Total	Selenium, Total	Silver, Total	Zinc, Total	Cyanide, Free	Cyanide, Total	Mean PEC Quotient	Mean TEC Quotient
	PEC Quot. >0.5	Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	NA	NA
	has hit > PEC	Background:	0.147	15.5	2.32	1	110	0.87	0.87	NL	NL
	all hits < PEC	PEC:	1.06	48.6	NL	NL	459	NL	NL	0.5	NL
		TEC:	0.18	22.7	NL	NL	121	NL	NL	NL	0.5
Location	FieldID	Depth									
SD-H3	SDH3-1221- 101603-01	12 - 21	---	---	---	---	---	---	---	---	---
SD-I1	SDI1-0012- 101503-01	0 - 12	---	---	---	---	---	---	---	---	0.60
SD-I1	SDI1-1224- 101503-01	12 - 0	---	---	---	---	---	---	---	3.88	---
SD-I1	SDI1-2445- 101503-01	24 - 45	---	---	---	---	---	---	---	---	---
SD-I1	SDI1-2445- 101503-02	24 - 45	---	---	---	---	---	---	---	---	---
SD-I2	SDI2-0012- 101503-01	0 - 12	---	---	---	---	---	---	---	---	---
SD-I2	SDI2-1224- 101503-01	12 - 0	---	---	---	---	---	---	---	---	---
SD-I3	SDI3-0012- 101503-01	0 - 12	---	39	---	---	114	---	1.5	0.63	1.90
SD-J1	SDJ1012-042203-01	0 - 12	---	26	---	---	---	---	---	---	1.18
SD-J2	SDJ2-0012- 101503-01	0 - 12	---	34	---	---	---	---	---	0.60	1.74
SD-J2	SDJ2-1224- 101503-01	12 - 0	---	20	---	---	---	---	---	---	0.84
SD-J3	SDJ3012-042203-01	0 - 12	---	19	---	---	---	---	---	---	0.94
SD-J3	SDJ31224-042203-01	12 - 24	---	---	---	---	---	---	---	---	---
SD-K1	SDK1-0012- 101503-01	0 - 12	---	29	---	---	139	---	---	0.59	1.81
SD-K1	SDK1-1224- 101503-01	12 - 0	---	---	---	---	---	---	---	---	0.53
SD-K2	SDK2-1224- 101503-01	12 - 0	---	---	---	---	---	---	---	---	---
SD-K3	SDK3-0012- 101503-01	0 - 12	---	---	---	---	---	---	---	---	---
SD-K3	SDK3-1224- 101503-01	12 - 0	---	---	---	---	---	---	---	---	---
SD-L1	SDL1012 052003-01	0 - 12	---	---	---	---	---	---	---	---	3.09
SD-L1	SDL1012 052003-02	0 - 12	---	---	---	---	---	---	---	0.76	2.71
SD-L2	SDL2012 052003-01	0 - 12	0.26	---	---	---	---	---	---	---	0.95
SD-L3	SDL3012 052003-01	0 - 12	---	---	---	---	---	---	---	---	---
SD-M1	SDM1012 052003-01	0 - 12	---	---	---	---	---	---	---	0.74	2.44
SD-M1	SDM11224 052003-01	12 - 24	---	---	---	---	---	---	---	---	---
SD-M2	SDM2012 052003-01	0 - 12	---	---	---	---	---	---	---	---	---
SD-M2	SDM21224 052003-01	12 - 24	---	---	---	---	---	---	---	---	---
SD-M3	SDM3012 052003-01	0 - 12	---	---	---	---	---	---	---	---	---
SD-M3	SDM31224 052003-01	12 - 24	---	---	---	---	---	---	---	---	---
SD-BG1	SDBG1012-041803-01	0 - 12	---	---	---	---	---	---	---	---	0.65467264793122
SD-BG1	SDBG11224-041803-01	12 - 24	---	---	2.4	---	---	---	---	---	---
SD-BG4	SDBG4012-042103-01	0 - 12	---	---	---	---	---	---	---	---	---
SD-BG4	SDBG41224-042103-01	12 - 24	---	---	---	---	---	---	---	---	---
SD-BG5	SDBG5012-042103-01	0 - 12	---	---	---	---	---	---	---	---	---
SE/RC-1/3	SE/RC-1/3	0 - 3	---	374	---	1.1 J	1590	---	4.5	3.96	12.22
SE/RC-1/12	SE/RC-1/12	6 - 12	---	37.1	---	---	345	---	4.5	---	1.81
SE/RC-2/3	SE/RC-2/3	0 - 3	---	133	---	---	232	---	1.2	1.43	4.25
SE/RC-2/12	SE/RC-2/12	6 - 12	---	---	---	---	---	---	---	---	---
SE/RC-3/3	SE/RC-3/3	0 - 3	---	77.9	---	---	658	---	---	1.12	3.55
SE/RC-3/12	SE/RC-3/12	6 - 12	---	349	---	---	921	---	11.8	2.51	7.93
SE/RC-3/12	SE/RC-6/12	6 - 12	---	432	---	---	2120	---	17.1	4.55	14.53
SE/RC-4/3	SE/RC-4/3	0 - 3	---	15.6	---	---	---	---	---	---	0.67
SE/RC-4/12	SE/RC-4/12	6 - 12	---	---	---	1.2 J	---	---	---	---	0.41
SE/RC-5/3	SE/RC-5/3	0 - 3	---	87.9	---	1.3 J	425	---	1.7	1.82	5.65
SE/RC-5/12	SE/RC-5/12	6 - 12	---	---	---	---	---	---	---	---	---
SE/RC-6/1	SE/RC-6/1	6 - 12	---	---	---	1.1 J	---	---	---	---	---
SE/RC-7/1	SE/RC-7/1	0 - 3	---	62.2	---	---	163	---	2	0.73	3.42
SE/RC-7/2	SE/RC-7/2	6 - 12	0.19	267	---	---	466	---	8.4	1.77	6.72
SE/RC-8/1	SE/RC-8/1	0 - 3	---	24.5	---	2.2 J	160	---	---	---	1.94

Table 2

Summary of Sediment Data Exceeding Screening Criteria for Protection of Aquatic Life

JCI - FOWLERVILLE

			Mercury, Total	Nickel, Total	Selenium, Total	Silver, Total	Zinc, Total	Cyanide, Free	Cyanide, Total	Mean PEC Quotient	Mean TEC Quotient
	PEC Quot. >0.5	Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	NA	NA
	has hit > PEC	Background:	0.147	15.5	2.32	1	110	0.87	0.87	NL	NL
	all hits < PEC	PEC:	1.06	48.6	NL	NL	459	NL	NL	0.5	NL
		TEC:	0.18	22.7	NL	NL	121	NL	NL	NL	0.5
Location	FieldID	Depth									
SE/RC-8/2	SE/RC-8/2	6 - 12	---	---	---	---	---	---	---	---	---
SE/RC-9/1	SE/RC-9/1	0 - 3	---	67.1	---	---	152	---	---	0.99	2.89
SE/RC-9/2	SE/RC-9/2	6 - 12	0.16	117	---	---	463	---	1.5	2.11	6.40
SE/RC-10/1	SE/RC-10/1	0 - 3	---	---	---	---	220	---	---	---	1.82
SE/RC-10/2	SE/RC-10/2	6 - 12	---	---	---	---	---	---	2.8	---	0.87
SE/RC-11/1	SE/RC-11/1	0 - 3	---	---	---	---	---	---	---	---	2.02
SE/RC-11/2	SE/RC-11/2	6 - 12	---	---	---	---	---	---	---	---	---
SE/RC-12/1	SE/RC-12/1	0 - 3	---	---	---	---	---	---	---	---	---
SE/RC-13/2	SE/RC-13/2	6 - 12	---	---	---	---	---	---	---	---	---
SE/RC-13/2	SE/RC-13/2 Dup	6 - 12	---	---	---	---	---	---	---	---	---
SE/RC-15/1	SRC-15/136787	0 - 0	---	---	---	---	---	---	11.4, 4.8	---	---
SE/RC-15/2	SRC-15/236787	0 - 0	---	---	---	---	---	---	---	---	0.60
SE/RC-16/1	SRC-16/136787	0 - 0	---	---	---	---	---	---	1.3, 4.5	---	0.89
SE/RC-17/1	SRC-17/136787	0 - 0	---	---	---	---	---	---	---	1.40	4.02
SE/RC-17/2	SRC-17/236787	0 - 0	---	---	---	---	---	---	---	0.71	1.81
SE/RC-18/1	SRC-18/136787	0 - 0	---	---	---	---	---	---	---	---	1.62
SE/RC-19/1	SRC-19/136787	0 - 0	---	---	---	---	---	---	---	---	2.97
SE/RC-19/2	SRC-19/236787	0 - 0	---	---	---	---	---	---	---	---	1.87
SE/RC-21/1	SRC-21/136787	0 - 0	---	---	---	---	---	---	---	---	---
SE/RC-22A/1	SRC-22A/136787	0 - 0	---	---	---	---	---	---	5.6	---	---
SE/RC-22A/2	SRC-22A/236787	0 - 0	---	---	---	---	---	---	1.4, 13.7	---	0.69
SE/RC-23/1	SRC-23/1 DEP36787	0 - 0	---	---	---	---	---	---	0.88 B	---	0.67
SE/RC-24-1	SRC-24/136787	0 - 0	---	---	---	---	---	---	1	---	---
SE/RC-100/1	SE/RC-100/1	0 - 3	---	---	---	---	---	---	2	---	---
SE/RC-101/1	SE/RC-101/1	0 - 3	---	---	---	---	---	---	2	---	---
SE/RC-103/1	SE/RC-103/1	0 - 3	---	---	---	---	---	---	---	---	---

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location	SDBG1	SDBG1	SDBG2	SDBG2	SDBG3	SDBG3	SDBG4	SDBG4	SDBG5	SDBG5	SD-A1	SD-A1	SD-A2	SD-A2	SD-A2	SD-A3	SD-A3
		Field ID:	SDBG1012-041803-01	SDBG11224-041803-01	SDBG21224-041803-01	SDBG2012-041803-01	SDBG3012-042103-01	SDBG31224-042103-01	SDBG4012-042103-01	SDBG41224-042103-01	SDBG5012-042103-01	SDBG51224-042103-01	SDA1012-042303-01	SDA11224-042303-01	SDA2012-042303-01	SDA2012-042303-02	SDA21224-042303-01	SDA3012-042303-01	SDA31224-042303-01
		Date Sampled:	4/18/2003	4/18/2003	4/18/2003	4/18/2003	4/21/2003	4/21/2003	4/21/2003	4/21/2003	4/21/2003	4/21/2003	4/23/2003	4/23/2003	4/23/2003	4/23/2003	4/23/2003	4/23/2003	4/23/2003
		Depth (ft):	0 - 12	12 - 24	12 - 24	0 - 12	0 - 12	12 - 24	0 - 12	12 - 24	0 - 12	12 - 24	0 - 12	12 - 24	0 - 12	0 - 12	12 - 24	0 - 12	12 - 24
Volatile Organic Compounds																			
1,1,1,2-Tetrachloroethane	630-20-6	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
1,1,1-Trichloroethane	71-55-6	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
1,1,2-Trichloroethane	79-00-5	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
1,1-Dichloroethane	75-34-3	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	34 J	96	73	35 JB	69
1,1-Dichloroethene	75-35-4	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
1,1-Dichloropropylene	563-58-6	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
1,2,3-Trichlorobenzene	87-61-6	ug/kg	41 JB	430 U	380 U	340 U	300 U	270 U	320 U	340 U	400 U	330 U	390 UJB	370 U	410 U	380 U	320 U	370 U	250 U
1,2,3-Trichloropropane	96-18-4	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
1,2,4-Trichlorobenzene	120-82-1	ug/kg	41 JB	13 JB	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	12 JB	73 U	83 U	77 U	63 U	74 U	51 U
1,2,4-Trimethylbenzene	95-63-6	ug/kg	24 JB	16 JB	76 U	11 JB	59 U	54 U	63 U	68 U	79 U	67 U	27 JB	24 JB	21 JB	24 JB	16 JB	16 JB	51 U
1,2-Dibromo-3-chloropropane	96-12-8	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
1,2-Dichlorobenzene	95-50-1	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
1,2-Dichloroethane	107-06-2	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
1,2-Dichloroethene	540-59-0	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	78-87-5	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
1,3,5-Trimethylbenzene	108-67-8	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
1,3-Dichlorobenzene	541-73-1	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
1,3-Dichloropropane	142-28-9	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
1,4-Dichlorobenzene	106-46-7	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
2,2-Dichloropropane	594-20-7	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
2-Chlorotoluene	95-49-8	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
2-Hexanone	591-78-6	ug/kg	1200 U	860 U	760 U	690 U	590 U	540 U	630 U	680 U	790 U	670 U	780 U	730 U	830 U	770 U	630 U	740 U	510 U
4-Chlorotoluene	106-43-4	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
4-Isopropyltoluene	99-87-6	ug/kg	23 J	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
4-Methyl-2-pentanone	108-10-1	ug/kg	1200 U	860 U	760 U	690 U	590 U	540 U	630 U	680 U	790 U	670 U	780 U	730 U	830 U	770 U	630 U	740 U	510 U
Acetone	67-64-1	ug/kg	690 JB	500 JB	440 JB	380 JB	350 JB	290 JB	350 JB	340 JB	450 JB	340 JB	320 JB	240 JB	300 JB	340 JB	220 JB	290 JB	130 JB
Acrolein	107-02-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	71-43-2	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
Bromobenzene	108-86-1	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
Bromochloromethane	74-97-5	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
Bromoform	75-25-2	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
Bromomethane	74-83-9	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
Carbon disulfide	75-15-0	ug/kg	1200 U	860 U	760 U	690 U	590 U	540 U	630 U	680 U	790 U	670 U	780 U	730 U	830 U	18 J	630 U	740 U	510 U
Carbon tetrachloride	56-23-5	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
Chlorobenzene	108-90-7	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
Chloroethane	75-00-3	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
Chloroform	67-66-3	ug/kg	22 J	17 J	76 U	69 U	12 J	18 J	63 U	18 J	16 J	11 J	78 U	21 J	15 J	22 J	13 J	22 J	11 J
Chloromethane	74-87-3	ug/kg	44 J	22 J	23 J	22 J	15 J	32 J	16 J	18 J	22 J	17 J	29 J	23 J	23 J	31 J	28 J	23 J	51 U
cis-1,2-Dichloroethene	156-59-2	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	56 J	240	1100	38 J	1100
cis-1,3-Dichloropropene	10061-01-5	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
Dibromochloromethane	124-48-1	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
Dibromomethane	74-95-3	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
Dichlorobromomethane	75-27-4	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
Dichlorodifluoromethane	75-71-8	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
Ethylbenzene	100-41-4	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
Ethylene dibromide	106-93-4	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
Hexachlorobutadiene	87-68-3	ug/kg	160 JB	59 JB	760 U	27 JB	590 U	540 U	630 U	680 U	790 U	670 U	42 JB	29 JB	830 U	770 U	630 U	740 U	510 U
Isopropylbenzene	98-82-8	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
Methyl ethyl ketone	78-93-3	ug/kg	220 J	160 J	120 J	120 J	96 J	86 J	120 J	110 J	790 U	670 U	210 J	140 J	160 J	200 J	100 J	180 J	85 J
Methyl tert butyl ether	1634-04-4	ug/kg	1200 U	860 U	760 U	690 U	590 U	540 U	630 U	680 U	790 U	670 U	780 U	730 U	830 U	770 U	630 U	740 U	510 U
Methylene chloride	75-09-2	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
n-Butylbenzene	104-51-8	ug/kg	45 JB	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
n-Propylbenzene	103-65-1	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
Naphthalene	91-20-3	ug/kg	63 JB	21 JB	17 JB	12 JB	8 JB	8 JB	10 JB	170 U	200 U	170 U	21 JB	16 JB	21 JB	32 JB	11 JB	25 JB	7 JB
o-Xylene	95-47-6	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
sec-Butylbenzene	135-98-8	ug/kg	27 J	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
Styrene	100-42-5	ug/kg	13 J	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
tert-Butylbenzene	98-06-6	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location	SDBG1	SDBG1	SDBG2	SDBG2	SDBG3	SDBG3	SDBG4	SDBG4	SDBG5	SDBG5	SD-A1	SD-A1	SD-A2	SD-A2	SD-A2	SD-A3	SD-A3
		Field ID:	SDBG1012-041803-01	SDBG11224-041803-01	SDBG21224-041803-01	SDBG2012-041803-01	SDBG3012-042103-01	SDBG31224-042103-01	SDBG4012-042103-01	SDBG41224-042103-01	SDBG5012-042103-01	SDBG51224-042103-01	SDA1012-042303-01	SDA11224-042303-01	SDA2012-042303-01	SDA2012-042303-02	SDA21224-042303-01	SDA3012-042303-01	SDA31224-042303-01
		Date Sampled:	4/18/2003	4/18/2003	4/18/2003	4/18/2003	4/21/2003	4/21/2003	4/21/2003	4/21/2003	4/21/2003	4/21/2003	4/23/2003	4/23/2003	4/23/2003	4/23/2003	4/23/2003	4/23/2003	4/23/2003
		Depth (ft):	0 - 12	12 - 24	12 - 24	0 - 12	0 - 12	12 - 24	0 - 12	12 - 24	0 - 12	12 - 24	0 - 12	12 - 24	0 - 12	0 - 12	12 - 24	0 - 12	12 - 24
Tetrachloroethene	127-18-4	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
Toluene	108-88-3	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	25 J	63 U	74 U	51 U
trans-1,2-Dichloroethylene	156-60-5	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	25 J	45 J	78	19 JB	58
trans-1,3-Dichloropropene	10061-02-6	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
Trichloroethene	79-01-6	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	41 JB
Trichlorofluoromethane	75-69-4	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 U	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
Vinyl chloride	75-01-4	ug/kg	120 U	86 U	76 U	69 U	59 U	54 U	63 U	68 UJB	79 U	67 U	78 U	73 U	83 U	77 U	63 U	74 U	51 U
Xylene, Meta + Para	Not Applicable	ug/kg	240 U	170 U	150 U	140 U	120 U	110 U	130 U	140 U	160 U	130 U	40 J	35 J	41 J	150 U	130 U	150 U	100 U
Volatile Organic Compounds																			
1,2,4-Trichlorobenzene	120-82-1	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
1,2-Benzphenanthracene	218-01-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95-50-1	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
1,3-Dichlorobenzene	541-73-1	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
1,4-Dichlorobenzene	106-46-7	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4,5-Trichlorophenol	95-95-4	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4,6-Trichlorophenol	88-06-2	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4-Dichlorophenol	120-83-2	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4-Dimethylphenol	105-67-9	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4-Dinitrophenol	51-28-5	ug/kg	2200 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
2,4-Dinitrotoluene	121-14-2	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,6-Dinitrotoluene	606-20-2	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-Chloronaphthalene	91-58-7	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-Chlorophenol	95-57-8	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-Methylnaphthalene	91-57-6	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-Methylphenol	95-48-7	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-Nitroaniline	88-74-4	ug/kg	2200 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
2-Nitrophenol	88-75-5	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
3,3-Dichlorobenzidine	91-94-1	ug/kg	2600 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U
3,4-Methylphenol	108-39-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	99-09-2	ug/kg	2200 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
4,6-Dinitro-2-methylphenol	534-52-1	ug/kg	2200 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
4-Bromophenyl-phenylether	101-55-3	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-Chloroaniline	106-47-8	ug/kg	2200 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
4-Chlorophenyl-phenylether	7005-72-3	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-Methylphenol	106-44-5	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	54 J	330 U	330 U	330 U	330 U	330 U	330 U
4-Nitroaniline	100-01-6	ug/kg	2200 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
4-Nitrophenol	100-02-7	ug/kg	2200 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
Acenaphthene	83-32-9	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	48 J	330 U	330 U	96 J	330 U
Acenaphthylene	208-96-8	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Anthracene	120-12-7	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	38 J	330 U	41 J	330 U	330 U	330 U	330 U
Benz(a)anthracene	56-55-3	ug/kg	38 J	330 U	330 U	30 J	330 U	330 U	86 J	330 U	120 J	330 U	160 J	330 U	310 J	330 U	330 U	330 U	330 U
Benzidine	92-87-5	ug/kg	6500 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U
Benzo(a)pyrene	50-32-8	ug/kg	54 J	330 U	330 U	37 J	330 U	330 U	84 J	330 U	110 J	330 U	100 J	330 U	160 J	330 U	330 U	330 U	330 U
Benzo(b)fluoranthene	205-99-2	ug/kg	98 J	330 U	330 U	64 J	330 U	330 U	110 J	330 U	110 J	330 U	180 J	330 U	210 J	330 U	330 U	330 U	330 U
Benzo(g,h,i)perylene	191-24-2	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	35 J	330 U	47 J	330 U	4 J	330 U	32 J	330 U	330 U	330 U	330 U
Benzo(k)fluoranthene	207-08-9	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	69 J	330 U	92 J	330 U	120 J	330 U	140 J	330 U	330 U	330 U	330 U
Benzoic acid	65-85-0	ug/kg	4300 U	150 J	320 J	3300 U	3300 U	3300 U	3300 U	240 J	3300 U	280 J	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U
Benzyl alcohol	100-51-6	ug/kg	1700 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U
bis(2-Chloroethoxy)methane	111-91-1	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
bis(2-Chloroethyl)ether	111-44-4	ug/kg	130 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
bis(2-Chloroisopropyl)ether	108-60-1	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
bis(2-Ethylhexyl)phthalate	117-81-7	ug/kg	100 JB	42 JB	31 JB	42 JB	25 JB	330 U	30 JB	32 JB	41 JB	44 JB	240 J	52 J	91 J	83 J	44 J	330 U	29 J
Butyl benzyl phthalate	85-68-7	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	680	320 J	460	140 J	330 U	330 U	330 U
Carbazole	86-74-8	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Chrysene	218-01-9	ug/kg	56 J	330 U	330 U	42 J	330 U	330 U	110 J	330 U	140 J	330 U	250 J	330 U	180 J	38 J	330 U	330 U	330 U
Di-N-Butyl phthalate	84-74-2	ug/kg	220 J	180 J	85 J	100 J	330 U	330 U	35 J	40 J	33 J	43 J	330 U	330 U	330 U	330 U	330 U	330 U	35 J
Di-N-Octyl phthalate	117-84-0	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Dibenz(a,h)anthracene	53-70-3	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Dibenzofuran	132-64-9	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Diethylphthalate	84-66-2	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location	SDBG1	SDBG1	SDBG2	SDBG2	SDBG3	SDBG3	SDBG4	SDBG4	SDBG5	SDBG5	SD-A1	SD-A1	SD-A2	SD-A2	SD-A2	SD-A3	SD-A3
		Field ID:	SDBG1012-041803-01	SDBG11224-041803-01	SDBG21224-041803-01	SDBG2012-041803-01	SDBG3012-042103-01	SDBG31224-042103-01	SDBG4012-042103-01	SDBG41224-042103-01	SDBG5012-042103-01	SDBG51224-042103-01	SDA1012-042303-01	SDA11224-042303-01	SDA2012-042303-01	SDA2012-042303-02	SDA21224-042303-01	SDA3012-042303-01	SDA31224-042303-01
		Date Sampled:	4/18/2003	4/18/2003	4/18/2003	4/18/2003	4/21/2003	4/21/2003	4/21/2003	4/21/2003	4/21/2003	4/21/2003	4/23/2003	4/23/2003	4/23/2003	4/23/2003	4/23/2003	4/23/2003	4/23/2003
		Depth (ft):	0 - 12	12 - 24	12 - 24	0 - 12	0 - 12	12 - 24	0 - 12	12 - 24	0 - 12	12 - 24	0 - 12	12 - 24	0 - 12	0 - 12	12 - 24	0 - 12	12 - 24
Dimethyl phthalate	131-11-3	ug/kg	4300 U	3300 U	3300 U	38 J	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U
Fluoranthene	206-44-0	ug/kg	130 J	330 U	330 U	97 J	31 J	330 U	260 J	22 J	300 J	330 U	460	330 U	610	140 J	330 U	100 J	330 U
Fluorene	86-73-7	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Hexachlorobenzene	118-74-1	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Hexachlorobutadiene	87-68-3	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Hexachlorocyclopentadiene	77-47-4	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Hexachloroethane	67-72-1	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	32 J	330 U	46 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Isophorone	78-59-1	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
N-Nitroso-di-N-propylamine	621-64-7	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
N-Nitrosodiphenylamine	86-30-6	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Naphthalene	91-20-3	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Nitrobenzene	98-95-3	ug/kg	260 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
p-Chloro-m-cresol	59-50-7	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Pentachlorophenol	87-86-5	ug/kg	1000 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U
Phenanthrene	85-01-8	ug/kg	59 J	330 U	330 U	40 J	330 U	330 U	120 J	330 U	110 J	330 U	84 J	330 U	170 J	330 U	330 U	330 U	330 U
Phenol	108-95-2	ug/kg	430 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PNAs, Total	TPNA	ug/kg	535	NA	NA	383	58	NA	1106	22	1315	NA	1776	NA	2451	288	NA	316	NA
Pyrene	129-00-0	ug/kg	100 J	330 U	330 U	73 J	27 J	330 U	200 J	330 U	240 J	330 U	380	330 U	550	110 J	330 U	120 J	330 U
Polychlorinated Biphenyls (PCBs):																			
PCB-1248	12672-29-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1254	11097-69-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1260	11096-82-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB, Total	TPCB	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	18 J	NA	NA	NA	NA	NA	NA
PCB-1016	12674-11-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1221	11104-28-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1232	11141-16-5	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1242	53469-21-9	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1248	12672-29-6	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	18 J	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1254	11097-69-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1260	11096-82-5	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Total Metals:																			
Aluminum, Total	7429-90-5	mg/kg	NA	NA	3710	2400	1830	1340	1780	NA	2970	NA	3870	NA	NA	NA	NA	NA	2870
Arsenic, Total	7440-38-2	mg/kg	27	18	9	3.5	6.1	1.2	2.8	11	9.2	7.7	9.2	8.4	5.8	7.1	3	8.3	3.2
Barium, Total	7440-39-3	mg/kg	178	53	51	20	24	6.6	15	19	56	18	53	40	28	38	7.5	56	12
Cadmium, Total	7440-43-9	mg/kg	1.1	0.4	0.44	0.17	0.25	0.2	0.16	0.26	0.36	0.35	0.52	0.55	0.36	0.31	0.28	0.45	0.41
Chromium, Total	7440-47-3	mg/kg	14	6.8	6.2	4.1	4.6	3.6	3.9	5.7	6.4	4.5	97	7.6	23	25	4.8	20	7.3
Copper, Total	7440-50-8	mg/kg	16	5.2	6.2	2.7	3.9	3.2	4.4	3.8	9.3	5.1	85	9.5	17	21	4.4	29	6.4
Lead, Total	7439-92-1	mg/kg	17	4.4	14	5	3.2	1.7	3.4	3	10	7.5	26	14	5.9	45	2	6.5	3.3
Mercury, Total	7439-97-6	mg/kg	0.12	0.082 J	0.058 J	0.047 J	0.016 J	0.015 J	0.03 J	0.054 J	0.055 J	0.037 J	0.046 J	0.024 J	0.038 J	0.034 J	0.1 U	0.031 J	0.1 U
Nickel, Total	7440-02-0	mg/kg	15	7.3	7	5.3	6.9	6.2	4.3	8.3	6.3	6.5	71	10	19	20	8.2	17	12
Selenium, Total	7782-49-2	mg/kg	1.1	2.4	1	0.28 U	0.37	0.24 U	0.26 U	0.18 J	0.36	0.23 J	0.61	0.75	0.3 J	0.36	0.22 J	0.63	0.79
Silver, Total	7440-22-4	mg/kg	0.13 J	0.06 J	0.06 J	0.026 J	0.033 J	0.028 J	0.02 J	0.038 J	0.05 J	0.044 J	0.074 J	0.082 J	0.055 J	0.04 J	0.036 J	0.1 J	0.07 J
Zinc, Total	7440-66-6	mg/kg	96	30	39	20	18	12	16	18	34	20	372	35	76	85	13	83	21
Chromium(VI)	18540-29-9	mg/kg	60 U	45 U	58 U	15 U	11 U	2 U	2 U	18 U	29 U	14 U	18 U	26 U	55 U	43 U	2 U	58 U	2 U
Miscellaneous Parameters:																			
Cyanide, Free	57-12-5	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyanide, Total	57-12-5	mg/kg	0.09 J	0.05 J	0.04 J	0.03 J	0.2 U	0.2 U	0.2 U	0.02 J	0.2 U	0.2 U	0.2	0.2 U	0.07 J	0.04 J	0.03 J	0.012 J	0.2 U
Fractional Organic Carbon	FOC	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent moisture	MOIST	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Solids	SOLID	%	38	56	63	72	79	86	79	78	62	72	65	71	60	67	86	66	90
Percent Solids	Solids	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	TOC	%	16	9.2	6.5	3.1	1.7	0.2	0.9	1.5	5	3.2	7.1	5.6	8.1	5.3	1	6	0.6

NOTES:
U = Non-detect, value is reporting limit
J = Estimated value below reporting limit
NA = Parameter not analyzed
B = Blank qualified result
--- = Parameter not analyzed

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location	SDB1	SDB2	SDB3	SDB3	SDB3	SDB3	SD-C1	SD-C1	SDC2	SD-C3	SD-C3	SD-C3	SDC3	SDD1	SDD2	SDD2	SDD3
		Field ID:	SDB1-0016-101703-01	SDB2-0016-101703-01	SDB3-0012-101703-01	SDB3-1228-101703-01	SDB3-1228-101703-02	SDB3-3642-101703-01	SDC1012-042203-01	SDC11224-042203-01	SDC2-0013-101703-01	SDC3012-042203-01	SDC31224-042203-01	SDC31224-042203-02	SDC3-4248-101703-01	SDD1-0006-101603-01	SDD2-0007-101603-01	SDD2-2430-101703-01	SDD3-0012-101603-01
		Date Sampled:	10/17/2003	10/17/2003	10/17/2003	10/17/2003	10/17/2003	10/17/2003	4/22/2003	4/22/2003	10/17/2003	4/22/2003	4/22/2003	4/22/2003	10/17/2003	10/16/2003	10/16/2003	10/17/2003	10/16/2003
		Depth (ft):	0 - 16	0 - 16	0 - 12	12 - 28	12 - 28	36 - 42	0 - 12	12 - 24	0 - 13	0 - 12	12 - 24	12 - 24	42 - 48	0 - 6	0 - 7	24 - 30	0 - 12
Volatile Organic Compounds																			
1,1,1,2-Tetrachloroethane	630-20-6	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
1,1,1-Trichloroethane	71-55-6	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
1,1,2-Trichloroethane	79-00-5	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
1,1-Dichloroethane	75-34-3	ug/kg	96	52 J	120 U	21 J	18 J	56 U	37 J	30 J	69 U	70 U	70 U	17 J	24 J	14 J	28 J	58 U	74 U
1,1-Dichloroethene	75-35-4	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
1,1-Dichloropropylene	563-58-6	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
1,2,3-Trichlorobenzene	87-61-6	ug/kg	320 U	330 U	620 U	410 U	400 U	280 U	330 U	250 U	340 U	350 U	350 U	400 U	430 U	310 U	360 U	290 U	370 U
1,2,3-Trichloropropane	96-18-4	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
1,2,4-Trichlorobenzene	120-82-1	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
1,2,4-Trimethylbenzene	95-63-6	ug/kg	7.6 J	10 J	17 J	81 U	80 U	56 U	19 JB	28 JB	9 J	17 JB	70 U	79 U	86 U	14 J	12 J	58 U	12 J
1,2-Dibromo-3-chloropropane	96-12-8	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
1,2-Dichlorobenzene	95-50-1	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	18 J	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
1,2-Dichloroethane	107-06-2	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
1,2-Dichloroethene	540-59-0	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	78-87-5	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
1,3,5-Trimethylbenzene	108-67-8	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	13 JB	11 JB	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
1,3-Dichlorobenzene	541-73-1	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
1,3-Dichloropropane	142-28-9	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
1,4-Dichlorobenzene	106-46-7	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
2,2-Dichloropropane	594-20-7	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
2-Chlorotoluene	95-49-8	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
2-Hexanone	591-78-6	ug/kg	630 U	650 U	1200 U	810 U	800 U	560 U	660 U	500 U	690 U	700 U	700 U	790 U	860 U	620 U	720 U	580 U	740 U
4-Chlorotoluene	106-43-4	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
4-Isopropyltoluene	99-87-6	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
4-Methyl-2-pentanone	108-10-1	ug/kg	630 U	650 U	1200 U	810 U	800 U	560 U	660 U	500 U	690 U	700 U	700 U	790 U	860 U	620 U	720 U	580 U	740 U
Acetone	67-64-1	ug/kg	490 J	540 J	1100 J	450 J	560 J	320 J	210 JB	160 JB	690 U	260 JB	220 JB	310 JB	670 J	510 J	350 J	610	430 J
Acrolein	107-02-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	71-43-2	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
Bromobenzene	108-86-1	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
Bromochloromethane	74-97-5	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
Bromoform	75-25-2	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
Bromomethane	74-83-9	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
Carbon disulfide	75-15-0	ug/kg	12 J	25 J	1200 U	20 J	21 J	560 U	660 U	500 U	690 U	700 U	700 U	790 U	43 J	620 U	74 J	580 U	740 U
Carbon tetrachloride	56-23-5	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
Chlorobenzene	108-90-7	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
Chloroethane	75-00-3	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
Chloroform	67-66-3	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	18 J	16 J	69 U	70 U	70 U	16 J	86 U	62 U	72 U	58 U	74 U
Chloromethane	74-87-3	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	32 J	20 J	69 U	23 J	30 J	23 J	86 U	62 U	72 U	58 U	74 U
cis-1,2-Dichloroethene	156-59-2	ug/kg	2000	160	120 U	130	160	120	1100	710	49 J	70 U	70 U	79 U	30 J	57 J	420	58 U	74 U
cis-1,3-Dichloropropene	10061-01-5	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
Dibromochloromethane	124-48-1	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
Dibromomethane	74-95-3	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
Dichlorobromomethane	75-27-4	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
Dichlorodifluoromethane	75-71-8	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
Ethylbenzene	100-41-4	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	14 J	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
Ethylene dibromide	106-93-4	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
Hexachlorobutadiene	87-68-3	ug/kg	320 U	330 U	620 U	410 U	400 U	280 U	660 U	500 U	340 U	700 U	700 U	790 U	430 U	310 U	360 U	290 U	370 U
Isopropylbenzene	98-82-8	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
Methyl ethyl ketone	78-93-3	ug/kg	620 J	460 J	850 J	350 J	380 J	480 J	660 U	500 U	570 J	120 J	140 J	160 J	300 J	670	610 J	510 J	620 J
Methyl tert butyl ether	1634-04-4	ug/kg	630 U	650 U	1200 U	810 U	800 U	560 U	660 U	500 U	690 U	700 U	700 U	790 U	860 U	620 U	720 U	580 U	740 U
Methylene chloride	75-09-2	ug/kg	37 J	48 J	84 J	51	46 J	46 J	66 U	50 U	49 J	70 U	70 U	79 U	50 J	47 J	62 J	41 J	60 J
n-Butylbenzene	104-51-8	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
n-Propylbenzene	103-65-1	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
Naphthalene	91-20-3	ug/kg	320 U	290 J	76 J	410 U	400 U	280 U	11 JB	7 JB	32 J	10 JB	170 U	200 U	430 U	310 U	360 U	290 U	38 J
o-Xylene	95-47-6	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	8 J	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
sec-Butylbenzene	135-98-8	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
Styrene	100-42-5	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
tert-Butylbenzene	98-06-6	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location	SDB1	SDB2	SDB3	SDB3	SDB3	SDB3	SD-C1	SD-C1	SDC2	SD-C3	SD-C3	SD-C3	SDC3	SDD1	SDD2	SDD2	SDD3
		Field ID:	SDB1-0016-101703-01	SDB2-0016-101703-01	SDB3-0012-101703-01	SDB3-1228-101703-01	SDB3-1228-101703-02	SDB3-3642-101703-01	SDC1012-042203-01	SDC11224-042203-01	SDC2-0013-101703-01	SDC3012-042203-01	SDC31224-042203-01	SDC31224-042203-02	SDC3-4248-101703-01	SDD1-0006-101603-01	SDD2-0007-101603-01	SDD2-2430-101703-01	SDD3-0012-101603-01
		Date Sampled:	10/17/2003	10/17/2003	10/17/2003	10/17/2003	10/17/2003	10/17/2003	4/22/2003	4/22/2003	10/17/2003	4/22/2003	4/22/2003	4/22/2003	10/17/2003	10/16/2003	10/16/2003	10/17/2003	10/16/2003
		Depth (ft):	0 - 16	0 - 16	0 - 12	12 - 28	12 - 28	36 - 42	0 - 12	12 - 24	0 - 13	0 - 12	12 - 24	12 - 24	42 - 48	0 - 6	0 - 7	24 - 30	0 - 12
Tetrachloroethene	127-18-4	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
Toluene	108-88-3	ug/kg	63 U	8.5 J	120 U	81 U	9.6 J	56 U	18 J	50 U	7.6 J	70 U	70 U	79 U	86 U	8.7 J	13 J	58 U	19 J
trans-1,2-Dichloroethylene	156-60-5	ug/kg	160	39 J	120 U	81 U	80 U	56 U	100	88	69 U	70 U	26 J	79 U	86 U	62 U	81	58 U	74 U
trans-1,3-Dichloropropene	10061-02-6	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
Trichloroethene	79-01-6	ug/kg	63 U	80	120 U	81 U	80 U	56 U	410	690	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
Trichlorofluoromethane	75-69-4	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
Vinyl chloride	75-01-4	ug/kg	63 U	65 U	120 U	81 U	80 U	56 U	66 U	50 U	69 U	70 U	70 U	79 U	86 U	62 U	72 U	58 U	74 U
Xylene, Meta + Para	Not Applicable	ug/kg	130 U	130 U	250 U	160 U	160 U	110 U	32 J	100 U	140 U	140 U	140 U	160 U	170 U	120 U	140 U	120 U	150 U
Volatile Organic Compounds																			
1,2,4-Trichlorobenzene	120-82-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
1,2-Benzphenanthracene	218-01-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95-50-1	ug/kg	330 U	3.2 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
1,3-Dichlorobenzene	541-73-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
1,4-Dichlorobenzene	106-46-7	ug/kg	330 U	4.4 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4,5-Trichlorophenol	95-95-4	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4,6-Trichlorophenol	88-06-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4-Dichlorophenol	120-83-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4-Dimethylphenol	105-67-9	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4-Dinitrophenol	51-28-5	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
2,4-Dinitrotoluene	121-14-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,6-Dinitrotoluene	606-20-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-Chloronaphthalene	91-58-7	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-Chlorophenol	95-57-8	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-Methylnaphthalene	91-57-6	ug/kg	330 U	40 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-Methylphenol	95-48-7	ug/kg	330 U	17 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-Nitroaniline	88-74-4	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
2-Nitrophenol	88-75-5	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
3,3-Dichlorobenzidine	91-94-1	ug/kg	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U
3,4-Methylphenol	108-39-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	99-09-2	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
4,6-Dinitro-2-methylphenol	534-52-1	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
4-Bromophenyl-phenylether	101-55-3	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-Chloroaniline	106-47-8	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
4-Chlorophenyl-phenylether	7005-72-3	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-Methylphenol	106-44-5	ug/kg	330 U	11 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-Nitroaniline	100-01-6	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
4-Nitrophenol	100-02-7	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
Acenaphthene	83-32-9	ug/kg	26 J	100 J	10 J	330 U	330 U	330 U	330 U	330 U	44 J	330 U	330 U	330 U	330 U	330 U	10 J	330 U	9.5 J
Acenaphthylene	208-96-8	ug/kg	330 U	21 J	330 U	330 U	330 U	330 U	330 U	330 U	24 J	330 U	330 U	330 U	330 U	330 U	6.2 J	330 U	330 U
Anthracene	120-12-7	ug/kg	17 J	110 J	44 J	330 U	330 U	330 U	330 U	330 U	140 J	330 U	330 U	330 U	330 U	3.3 J	23 J	330 U	35 J
Benz(a)anthracene	56-55-3	ug/kg	66 J	250 J	200 J	330 U	330 U	330 U	330 U	330 U	280 J	44 J	330 U	330 U	330 U	14 J	90 J	4 J	180 J
Benzidine	92-87-5	ug/kg	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U
Benzo(a)pyrene	50-32-8	ug/kg	56 J	170 J	240 J	330 U	330 U	330 U	330 U	330 U	260 J	40 J	330 U	330 U	330 U	12 J	79 J	330 U	160 J
Benzo(b)fluoranthene	205-99-2	ug/kg	86 J	140 J	230 J	330 U	330 U	330 U	330 U	330 U	300 J	330 U	330 U	330 U	330 U	14 J	110 J	330 U	210 J
Benzo(g,h,i)perylene	191-24-2	ug/kg	48 J	110 J	190 J	330 U	330 U	330 U	330 U	330 U	170 J	330 U	330 U	330 U	330 U	15 J	54 J	6.3 J	120 J
Benzo(k)fluoranthene	207-08-9	ug/kg	31 J	170 J	220 J	330 U	330 U	330 U	330 U	330 U	150 J	330 U	330 U	330 U	330 U	9.3 J	43 J	330 U	99 J
Benzoic acid	65-85-0	ug/kg	3300 U	3300 U	3300 U	210 J	120 J	3300 U	3300 U	3300 U	9.4 J	3300 U	3300 U	3300 U	3300 U	5.5 J	3300 U	3300 U	27 J
Benzyl alcohol	100-51-6	ug/kg	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	5.1 J	1300 U	1300 U	1300 U
bis(2-Chloroethoxy)methane	111-91-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
bis(2-Chloroethyl)ether	111-44-4	ug/kg	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
bis(2-Chloroisopropyl)ether	108-60-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
bis(2-Ethylhexyl)phthalate	117-81-7	ug/kg	86 J	100 J	61 J	24 J	20 J	9.5 J	63 J	36 J	49 J	330 U	330 U	330 U	24 J	22 J	55 J	14 J	51 J
Butyl benzyl phthalate	85-68-7	ug/kg	330 U	330 U	330 U	330 U	330 U	5 J	330 U	330 U	330 U	13 J	330 U	330 U	7.5 J	330 U	330 U	330 U	330 U
Carbazole	86-74-8	ug/kg	14 J	41 J	34 J	330 U	330 U	330 U	330 U	330 U	25 J	330 U	330 U	330 U	330 U	330 U	5.8 J	330 U	21 J
Chrysene	218-01-9	ug/kg	80 J	240 J	280 J	5.2 J	4.3 J	3.1 J	330 U	330 U	310 J	56 J	330 U	330 U	330 U	13 J	75 J	6.4 J	160 J
Di-N-Butyl phthalate	84-74-2	ug/kg	47 J	80 J	110 J	62 J	47 J	27 J	61 J	58 J	40 J	64 J	84 J	83 J	76 J	38 J	55 J	72 J	77 J
Di-N-Octyl phthalate	117-84-0	ug/kg	330 U	330 U	14 J	330 U	330 U	330 U	330 U	330 U	7.4 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Dibenz(a,h)anthracene	53-70-3	ug/kg	10 J	48 J	72 J	330 U	330 U	330 U	330 U	330 U	42 J	330 U	330 U	330 U	330 U	330 U	14 J	330 U	27 J
Dibenzofuran	132-64-9	ug/kg	4.2 J	65 J	330 U	330 U	330 U	330 U	330 U	330 U	16 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	4.8 J
Diethylphthalate	84-66-2	ug/kg	20 J	11 J	21 J	12 J	12 J	5.8 J	330 U	330 U	17 J	330 U	330 U	330 U	10 J	11 J	13 J	11 J	13 J

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location	SDB1	SDB2	SDB3	SDB3	SDB3	SDB3	SD-C1	SD-C1	SDC2	SD-C3	SD-C3	SD-C3	SDC3	SDD1	SDD2	SDD2	SDD3
		Field ID:	SDB1-0016-101703-01	SDB2-0016-101703-01	SDB3-0012-101703-01	SDB3-1228-101703-01	SDB3-1228-101703-02	SDB3-3642-101703-01	SDC1012-042203-01	SDC11224-042203-01	SDC2-0013-101703-01	SDC3012-042203-01	SDC31224-042203-01	SDC31224-042203-02	SDC3-4248-101703-01	SDD1-0006-101603-01	SDD2-0007-101603-01	SDD2-2430-101703-01	SDD3-0012-101603-01
		Date Sampled:	10/17/2003	10/17/2003	10/17/2003	10/17/2003	10/17/2003	10/17/2003	4/22/2003	4/22/2003	10/17/2003	4/22/2003	4/22/2003	4/22/2003	10/17/2003	10/16/2003	10/16/2003	10/17/2003	10/16/2003
		Depth (ft):	0 - 16	0 - 16	0 - 12	12 - 28	12 - 28	36 - 42	0 - 12	12 - 24	0 - 13	0 - 12	12 - 24	12 - 24	42 - 48	0 - 6	0 - 7	24 - 30	0 - 12
Dimethyl phthalate	131-11-3	ug/kg	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	12 J	3300 U	3300 U
Fluoranthene	206-44-0	ug/kg	140 J	550	620	11 J	9.5 J	330 U	330 U	330 U	640	130 J	330 U	43 J	330 U	28 J	160 J	7.3 J	430
Fluorene	86-73-7	ug/kg	20 J	160 J	18 J	330 U	330 U	330 U	330 U	330 U	48 J	330 U	330 U	330 U	330 U	330 U	12 J	330 U	15 J
Hexachlorobenzene	118-74-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Hexachlorobutadiene	87-68-3	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Hexachlorocyclopentadiene	77-47-4	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Hexachloroethane	67-72-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	56 J	96 J	160 J	330 U	330 U	330 U	330 U	330 U	170 J	330 U	330 U	330 U	330 U	7.5 J	54 J	330 U	120 J
Isophorone	78-59-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
N-Nitroso-di-N-propylamine	621-64-7	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
N-Nitrosodiphenylamine	86-30-6	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Naphthalene	91-20-3	ug/kg	330 U	170 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Nitrobenzene	98-95-3	ug/kg	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
p-Chloro-m-cresol	59-50-7	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Pentachlorophenol	87-86-5	ug/kg	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U
Phenanthrene	85-01-8	ug/kg	64 J	330	25 J	330 U	330 U	330 U	330 U	330 U	400	70 J	330 U	330 U	330 U	12 J	51 J	7 J	180 J
Phenol	108-95-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PNAs, Total	TPNA	ug/kg	840	3045	2759	24.2	22.8	6.3	NA	NA	3468	440	NA	80	NA	154.1	921.2	39	2065.5
Pyrene	129-00-0	ug/kg	140 J	510	450	8 J	9 J	3.2 J	330 U	330 U	490	100 J	330 U	37 J	330 U	26 J	140 J	8 J	320 J
Polychlorinated Biphenyls (PCBs):																			
PCB-1248	12672-29-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1254	11097-69-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1260	11096-82-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB, Total	TPCB	ug/kg	26 J	67 J	NA	NA	NA	NA	NA	NA	NA	NA	5.2 J	NA	NA	NA	16 J	NA	NA
PCB-1016	12674-11-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1221	11104-28-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1232	11141-16-5	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1242	53469-21-9	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1248	12672-29-6	ug/kg	26 J	67 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	5.2 J	330 U	330 U	330 U	16 J	330 U	330 U
PCB-1254	11097-69-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1260	11096-82-5	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Total Metals:																			
Aluminum, Total	7429-90-5	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	2700	NA	NA	NA	NA	NA	NA	NA
Arsenic, Total	7440-38-2	mg/kg	4.2	8	15	14	10	14	7.6	3.4	6.3	4.4	9.4	14	17	6.1	7.3	5.7	8.7
Barium, Total	7440-39-3	mg/kg	41	40	125	67	60	15	21	7.1	38	36	34	42	56	32	28	21	67
Cadmium, Total	7440-43-9	mg/kg	0.16	0.12	0.4	0.26	0.23	0.071	0.48	0.28	0.11	0.31	0.36	0.5	0.18	0.081	0.12	0.057 J	0.2
Chromium, Total	7440-47-3	mg/kg	27	54	12	9.5	12	7	12	4.4	14	13	18	17	7.3	13	27	5	11
Copper, Total	7440-50-8	mg/kg	24	32	9.5	8.3	9.2	6.5	22	9.9	9.8	5	14	19	39	12	15	6.1	10
Lead, Total	7439-92-1	mg/kg	5.2	10	16	6.8	5.9	3.2	5	2.7	5.9	27	6.7	7	5.2	5.4	5.1	3.5	6.7
Mercury, Total	7439-97-6	mg/kg	0.043 J	0.045 J	0.061 J	0.056 J	0.03 J	0.0091 J	0.021 J	0.1 U	0.027 J	0.034 J	0.05 J	0.085 J	0.052 J	0.02 J	0.025 J	0.013 J	0.045 J
Nickel, Total	7440-02-0	mg/kg	19	24	9.6	9.7	9.1	8.4	39	34	8.8	7	18	27	40	12	12	8	12
Selenium, Total	7782-49-2	mg/kg	0.22 J	0.24 J	0.64	0.54	0.42	0.18 J	0.22 J	0.35	0.21 J	0.46	0.51	0.58	0.41	0.25	0.19 J	0.18 J	0.34
Silver, Total	7440-22-4	mg/kg	0.022 J	0.034 J	0.076 J	0.081 J	0.07 J	0.045 J	0.068 J	0.037 J	0.032 J	0.052 J	0.064 J	0.066 J	0.054 J	0.06 J	0.021 J	0.029 J	0.035 J
Zinc, Total	7440-66-6	mg/kg	77	174	63	38	37	16	249	11	44	32	56	64	26	26	37	16	47
Chromium(VI)	18540-29-9	mg/kg	2 U	2 U	3.4 U	3.2 U	2.6 U	2 U	2 U	2 U	2 U	19 U	39 U	32 U	2.7 U	2 U	2 U	2 U	2 U
Miscellaneous Parameters:																			
Cyanide, Free	57-12-5	mg/kg	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cyanide, Total	57-12-5	mg/kg	0.77	0.31	0.73	1.6	0.56	0.2 U	0.09 J	0.2 U	0.25	0.02 J	0.35	0.35	0.2 U	0.2 U	1.2	0.05 J	0.26
Fractional Organic Carbon	FOC	%	2.8	3.5	12	8.3	7.2	0.5	NA	NA	4.5	NA	NA	NA	9.6	1.7	5.1	0.7	6.2
Percent moisture	MOIST	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Solids	SOLID	%	73	76	42	58	62	90	87	91	73	72	69	68	58	82	70	87	66
Percent Solids	Solids	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	TOC	%	NA	NA	NA	NA	NA	NA	1	0.4	NA	2.7	5.7	4.6	NA	NA	NA	NA	NA

NOTES:
U = Non-detect, value is reporting limit
J = Estimated value below reporting limit
NA = Parameter not analyzed
B = Blank qualified result
--- = Parameter not analyzed

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location:	SD-E1	SD-E1	SDE1	SD-E2	SD-E2	SD-E3	SD-E3	SDF1	SDF1	SDF2	SDF2	SDF3	SDF3	SD-G1	SD-G1	SD-G1	SD-G2
		Field ID:	SDE1012-042203-01	SDE11224-042203-01	SDE1-3642-101703-01	SDE2012-042203-01	SDE21224-042203-01	SDE3012-042203-01	SDE31224-042203-01	SDF1-0012-101603-01	SDF1-1224-101603-01	SDF2-0012-101603-01	SDF2-1226-101603-01	SDF3-0012-101603-01	SDF3-1222-101603-01	SDG1-0012-101603-01	SDG1-1228-101603-01	SDG1-1228-101603-02	SDG2-0012-101603-01
		Date Sampled:	4/22/2003	4/23/2003	10/17/2003	4/22/2003	4/22/2003	4/22/2003	4/22/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003
		Depth (ft):	0 - 12	12 - 24	36 - 42	0 - 12	12 - 24	0 - 12	12 - 24	0 - 12	12 - 24	0 - 12	12 - 26	0 - 12	12 - 22	0 - 12	12 - 28	12 - 28	0 - 12
Volatile Organic Compounds																			
1,1,1,2-Tetrachloroethane	630-20-6	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
1,1,1-Trichloroethane	71-55-6	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
1,1,2-Trichloroethane	79-00-5	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
1,1-Dichloroethane	75-34-3	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
1,1-Dichloroethene	75-35-4	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
1,1-Dichloropropylene	563-58-6	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
1,2,3-Trichlorobenzene	87-61-6	ug/kg	410 U	280 U	310 U	460 U	510 U	360 U	290 U	270 U	270 U	350 U	290 U	370 U	310 U	380 U	290 U	330 U	300 U
1,2,3-Trichloropropane	96-18-4	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
1,2,4-Trichlorobenzene	120-82-1	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	NA	NA	NA	NA
1,2,4-Trimethylbenzene	95-63-6	ug/kg	82 U	57 U	63 U	18 JB	100 U	71 U	58 U	21 J	18 J	19 J	14 J	13 J	12 J	77 U	59 U	67 U	59 U
1,2-Dibromo-3-chloropropane	96-12-8	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
1,2-Dichlorobenzene	95-50-1	ug/kg	82 U	57 U	63 U	23 J	100 U	22 J	58 U	54 U	54 U	69 U	59 U	74 U	63 U	330 U, 77 U	330 U, 59 U	330 U, 67 U	330 U, 59 U
1,2-Dichloroethane	107-06-2	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
1,2-Dichloroethene	540-59-0	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	78-87-5	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
1,3,5-Trimethylbenzene	108-67-8	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
1,3-Dichlorobenzene	541-73-1	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	330 U, 77 U	330 U, 59 U	330 U, 67 U	330 U, 59 U
1,3-Dichloropropane	142-28-9	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
1,4-Dichlorobenzene	106-46-7	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	NA	NA	NA	NA
2,2-Dichloropropane	594-20-7	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
2-Chlorotoluene	95-49-8	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
2-Hexanone	591-78-6	ug/kg	820 U	570 U	630 U	920 U	1000 U	710 U	580 U	540 U	540 U	690 U	590 U	740 U	630 U	770 U	590 U	670 U	590 U
4-Chlorotoluene	106-43-4	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
4-Isopropyltoluene	99-87-6	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
4-Methyl-2-pentanone	108-10-1	ug/kg	820 U	570 U	630 U	920 U	1000 U	710 U	580 U	540 U	540 U	690 U	590 U	740 U	630 U	770 U	590 U	670 U	590 U
Acetone	67-64-1	ug/kg	300 JB	200 JB	630 U	350 JB	370 JB	260 JB	210 JB	330 J	440 J	640 J	590 U	660 J	440 J	360 J	590 U	320 J	590 U
Acrolein	107-02-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	71-43-2	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
Bromobenzene	108-86-1	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
Bromochloromethane	74-97-5	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
Bromoform	75-25-2	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
Bromomethane	74-83-9	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
Carbon disulfide	75-15-0	ug/kg	42 J	12 J	16 J	920 U	44 J	710 U	580 U	540 U	540 U	690 U	590 U	740 U	630 U	22 J	590 U	670 U	16 J
Carbon tetrachloride	56-23-5	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
Chlorobenzene	108-90-7	ug/kg	14 J	35 J	17 J	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
Chloroethane	75-00-3	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
Chloroform	67-66-3	ug/kg	14 J	22 J	63 U	92 U	17 J	10 J	14 J	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
Chloromethane	74-87-3	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
cis-1,2-Dichloroethene	156-59-2	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
cis-1,3-Dichloropropene	10061-01-5	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
Dibromochloromethane	124-48-1	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
Dibromomethane	74-95-3	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
Dichlorobromomethane	75-27-4	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
Dichlorodifluoromethane	75-71-8	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
Ethylbenzene	100-41-4	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	8 J	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
Ethylene dibromide	106-93-4	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
Hexachlorobutadiene	87-68-3	ug/kg	820 U	570 U	310 U	920 U	1000 U	710 U	580 U	270 U	270 U	350 U	290 U	370 U	310 U	NA	NA	NA	NA
Isopropylbenzene	98-82-8	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
Methyl ethyl ketone	78-93-3	ug/kg	160 J	140 J	370 J	220 J	220 J	200 J	200 J	320 J	550	530 J	500 J	900	470 J	710 J	530 J	400 J	430 J
Methyl tert butyl ether	1634-04-4	ug/kg	820 U	570 U	630 U	920 U	1000 U	710 U	580 U	540 U	540 U	690 U	590 U	740 U	630 U	770 U	590 U	670 U	590 U
Methylene chloride	75-09-2	ug/kg	82 U	57 U	79 J	92 U	100 U	71 U	58 U	24 J	32 J	58 J	46 J	41 J	46 J	23 J	26 J	29 J	38 J
n-Butylbenzene	104-51-8	ug/kg	82 U	57 U	63 U	92 U	100 U	21 JB	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
n-Propylbenzene	103-65-1	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
Naphthalene	91-20-3	ug/kg	210 U	21 JB	310 U	230 U	31 JB	36 JB	9 JB	23 J	270 U	350 U	290 U	370 U	310 U	330 U, 380 U	290 U, 330 U	330 U	1.8 J, 300 U
o-Xylene	95-47-6	ug/kg	82 U	57 U	63 U	15 J	100 U	71 U	58 U	64	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
sec-Butylbenzene	135-98-8	ug/kg	82 U	57 U	63 U	58 J	100 U	33 J	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
Styrene	100-42-5	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
tert-Butylbenzene	98-06-6	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location	SD-E1	SD-E1	SDE1	SD-E2	SD-E2	SD-E3	SD-E3	SDF1	SDF1	SDF2	SDF2	SDF3	SDF3	SD-G1	SD-G1	SD-G1	SD-G2
		Field ID:	SDE1012-042203-01	SDE11224-042203-01	SDE1-3642-101703-01	SDE2012-042203-01	SDE21224-042203-01	SDE3012-042203-01	SDE31224-042203-01	SDF1-0012-101603-01	SDF1-1224-101603-01	SDF2-0012-101603-01	SDF2-1226-101603-01	SDF3-0012-101603-01	SDF3-1222-101603-01	SDG1-0012-101603-01	SDG1-1228-101603-01	SDG1-1228-101603-02	SDG2-0012-101603-01
		Date Sampled:	4/22/2003	4/23/2003	10/17/2003	4/22/2003	4/22/2003	4/22/2003	4/22/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003
		Depth (ft):	0 - 12	12 - 24	36 - 42	0 - 12	12 - 24	0 - 12	12 - 24	0 - 12	12 - 24	0 - 12	12 - 26	0 - 12	12 - 22	0 - 12	12 - 28	12 - 28	0 - 12
Tetrachloroethene	127-18-4	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
Toluene	108-88-3	ug/kg	25 J	10 J	63 U	25 J	15 J	71 U	58 U	14 J	12 J	19 J	10 J	11 J	10 J	77 U	59 U	8.7 J	9.5 J
trans-1,2-Dichloroethylene	156-60-5	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
trans-1,3-Dichloropropene	10061-02-6	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
Trichloroethene	79-01-6	ug/kg	42 JB	27 JB	63 U	42 J	59 JB	71 U	25 JB	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
Trichlorofluoromethane	75-69-4	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
Vinyl chloride	75-01-4	ug/kg	82 U	57 U	63 U	92 U	100 U	71 U	58 U	54 U	54 U	69 U	59 U	74 U	63 U	77 U	59 U	67 U	59 U
Xylene, Meta + Para	Not Applicable	ug/kg	160 U	110 U	120 U	180 U	200 U	140 U	120 U	32 J	25 J	30 J	23 J	150 U	120 U	150 U	120 U	130 U	120 U
Volatile Organic Compounds																			
1,2,4-Trichlorobenzene	120-82-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U, 77 U	330 U, 59 U	330 U, 67 U	330 U, 59 U
1,2-Benzphenanthracene	218-01-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95-50-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	NA	NA
1,3-Dichlorobenzene	541-73-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	NA	NA
1,4-Dichlorobenzene	106-46-7	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U, 77 U	330 U, 59 U	330 U, 67 U	330 U, 59 U
2,4,5-Trichlorophenol	95-95-4	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4,6-Trichlorophenol	88-06-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4-Dichlorophenol	120-83-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4-Dimethylphenol	105-67-9	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4-Dinitrophenol	51-28-5	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
2,4-Dinitrotoluene	121-14-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,6-Dinitrotoluene	606-20-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-Chloronaphthalene	91-58-7	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-Chlorophenol	95-57-8	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-Methylnaphthalene	91-57-6	ug/kg	330 U	330 U	330 U	940	410	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-Methylphenol	95-48-7	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-Nitroaniline	88-74-4	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
2-Nitrophenol	88-75-5	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
3,3-Dichlorobenzidine	91-94-1	ug/kg	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U
3,4-Methylphenol	108-39-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	99-09-2	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
4,6-Dinitro-2-methylphenol	534-52-1	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
4-Bromophenyl-phenylether	101-55-3	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-Chloroaniline	106-47-8	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
4-Chlorophenyl-phenylether	7005-72-3	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-Methylphenol	106-44-5	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-Nitroaniline	100-01-6	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
4-Nitrophenol	100-02-7	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
Acenaphthene	83-32-9	ug/kg	330 U	330 U	3.6 J	330 U	330 U	330 U	330 U	330 U	330 U	5.1 J	330 U	330 U	330 U	330 U	330 U	330 U	8 J
Acenaphthylene	208-96-8	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	4.7 J	330 U	330 U	330 U	330 U	330 U	330 U	9.700001 J
Anthracene	120-12-7	ug/kg	300 J	91 J	330 U	330 U	370	330 U	330 U	330 U	330 U	13 J	330 U	330 U	330 U	330 U	330 U	330 U	64 J
Benz(a)anthracene	56-55-3	ug/kg	850	300 J	5.3 J	330 U	1100	330 U	330 U	8 J	330 U	56 J	5.9 J	21 J	330 U	330 U	330 U	330 U	180 J
Benzidine	92-87-5	ug/kg	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U
Benzo(a)pyrene	50-32-8	ug/kg	630	230 J	5.6 J	330 U	830	330 U	330 U	9.3 J	330 U	51 J	330 U	18 J	330 U	330 U	330 U	330 U	180 J
Benzo(b)fluoranthene	205-99-2	ug/kg	610	230 J	330 U	330 U	900	330 U	330 U	14 J	330 U	74 J	330 U	23 J	330 U	330 U	330 U	330 U	140 J
Benzo(g,h,i)perylene	191-24-2	ug/kg	330	86 J	5.8 J	330 U	320 J	330 U	330 U	6.4 J	330 U	42 J	330 U	10 J	330 U	330 U	330 U	330 U	92 J
Benzo(k)fluoranthene	207-08-9	ug/kg	470	220 J	330 U	330 U	520	330 U	330 U	6.4 J	330 U	19 J	330 U	12 J	330 U	330 U	330 U	330 U	120 J
Benzoic acid	65-85-0	ug/kg	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	8.9 J	3300 U	3300 U	3300 U	150 J	45 J	22 J	3300 U
Benzyl alcohol	100-51-6	ug/kg	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U
bis(2-Chloroethoxy)methane	111-91-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
bis(2-Chloroethyl)ether	111-44-4	ug/kg	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
bis(2-Chloroisopropyl)ether	108-60-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
bis(2-Ethylhexyl)phthalate	117-81-7	ug/kg	890	54 J	11 J	330 U	2800	100 J	51 J	20 J	16 J	41 J	14 J	23 J	20 J	11 J	9.4 J	11 J	14 J
Butyl benzyl phthalate	85-68-7	ug/kg	49 J	330 U	330 U	330 U	330 U	330 U	330 U	18 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Carbazole	86-74-8	ug/kg	110 J	43 J	330 U	330 U	180 J	330 U	330 U	330 U	330 U	8.3 J	330 U	330 U	330 U	330 U	330 U	330 U	27 J
Chrysene	218-01-9	ug/kg	630	310 J	7.3 J	330 U	890	330 U	330 U	10 J	330 U	57 J	6.3 J	18 J	330 U	330 U	330 U	330 U	180 J
Di-N-Butyl phthalate	84-74-2	ug/kg	330 U	330 U	75 J	330 U	330 U	330 U	58 J	34 J	49 J	77 J	30 J	34 J	34 J	29 J	20 J	23 J	26 J
Di-N-Octyl phthalate	117-84-0	ug/kg	330 U	330 U	330 U	330 U	100 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Dibenz(a,h)anthracene	53-70-3	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	10 J	330 U	330 U	330 U	330 U	330 U	330 U	40 J
Dibenzofuran	132-64-9	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	7.2 J
Diethylphthalate	84-66-2	ug/kg	330 U	330 U	8.3 J	330 U	330 U	330 U	330 U	9.6 J	7.8 J	10 J	7.5 J	11 J	12 J	5.9 J	3.7 J	4.4 J	5.5 J

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location	SD-E1	SD-E1	SDE1	SD-E2	SD-E2	SD-E3	SD-E3	SDF1	SDF1	SDF2	SDF2	SDF3	SDF3	SD-G1	SD-G1	SD-G1	SD-G2
		Field ID:	SDE1012-042203-01	SDE11224-042203-01	SDE1-3642-101703-01	SDE2012-042203-01	SDE21224-042203-01	SDE3012-042203-01	SDE31224-042203-01	SDF1-0012-101603-01	SDF1-1224-101603-01	SDF2-0012-101603-01	SDF2-1226-101603-01	SDF3-0012-101603-01	SDF3-1222-101603-01	SDG1-0012-101603-01	SDG1-1228-101603-01	SDG1-1228-101603-02	SDG2-0012-101603-01
		Date Sampled:	4/22/2003	4/23/2003	10/17/2003	4/22/2003	4/22/2003	4/22/2003	4/22/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003
		Depth (ft):	0 - 12	12 - 24	36 - 42	0 - 12	12 - 24	0 - 12	12 - 24	0 - 12	12 - 24	0 - 12	12 - 26	0 - 12	12 - 22	0 - 12	12 - 28	12 - 28	0 - 12
Dimethyl phthalate	131-11-3	ug/kg	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U
Fluoranthene	206-44-0	ug/kg	1700	660	4.7 J	350	2600	120 J	330 U	21 J	330 U	140 J	12 J	40 J	6.8 J	5.4 J	330 U	330 U	470
Fluorene	86-73-7	ug/kg	220 J	65 J	330 U	330 U	360	330 U	330 U	330 U	330 U	7.1 J	330 U	330 U	330 U	330 U	330 U	330 U	35 J
Hexachlorobenzene	118-74-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Hexachlorobutadiene	87-68-3	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U, 380 U	290 U, 330 U	330 U	300 U, 330 U
Hexachlorocyclopentadiene	77-47-4	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Hexachloroethane	67-72-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	350	110 J	330 U	330 U	300 J	330 U	330 U	6.3 J	330 U	36 J	330 U	8.8 J	330 U	330 U	330 U	330 U	81 J
Isophorone	78-59-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
N-Nitroso-di-N-propylamine	621-64-7	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
N-Nitrosodiphenylamine	86-30-6	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Naphthalene	91-20-3	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	NA	NA
Nitrobenzene	98-95-3	ug/kg	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
p-Chloro-m-cresol	59-50-7	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Pentachlorophenol	87-86-5	ug/kg	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	4.5 J
Phenanthrene	85-01-8	ug/kg	1000	380	8.2 J	240 J	1300	43 J	330 U	8.2 J	330 U	38 J	8.5 J	11 J	3 J	330 U	330 U	330 U	370
Phenol	108-95-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PNAs, Total	TPNA	ug/kg	8590	3282	51.5	1890	12200	244	NA	105.6	NA	652.9	44.7	197.8	16	NA	NA	NA	NA
Pyrene	129-00-0	ug/kg	1500	600	11 J	360	2300	81 J	330 U	16 J	330 U	100 J	12 J	36 J	6.2 J	330 U	330 U	330 U	420
Polychlorinated Biphenyls (PCBs):																			
PCB-1248	12672-29-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	11 J	330 U	330 U	39 J
PCB-1254	11097-69-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1260	11096-82-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB, Total	TPCB	ug/kg	9180 J	12 J	16 J	560 J	4900	262 J	34 J	12 J	NA	320 J	11 J	44 J	NA	NA	NA	NA	NA
PCB-1016	12674-11-2	ug/kg	640 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1221	11104-28-2	ug/kg	640 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1232	11141-16-5	ug/kg	640 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1242	53469-21-9	ug/kg	640 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1248	12672-29-6	ug/kg	8700	12 J	16 J	370	4500	240 J	34 J	12 J	330 U	320 J	11 J	44 J	330 U	NA	NA	NA	NA
PCB-1254	11097-69-1	ug/kg	640 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1260	11096-82-5	ug/kg	480 J	330 U	330 U	190 J	400	22 J	330 U	330 U	330 U	59 J	330 U	330 U	330 U	330 U	330 U	330 U	17 J
Total Metals:																			
Aluminum, Total	7429-90-5	mg/kg	4360	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic, Total	7440-38-2	mg/kg	19	5.4	2.2	18	11	4.3	1.4	4.5	2.4	5.7	1.5	7.5	1.3	65	21	22	12
Barium, Total	7440-39-3	mg/kg	64	13	11	133	119	31	9.9	19	17	37	7.5	43	7.4	36	21	14	14
Cadmium, Total	7440-43-9	mg/kg	0.86	0.27	0.089	0.87	1.3	0.23	0.29	0.066	0.041 J	0.088	0.036 J	0.18	0.035 J	0.093	0.063	0.041 J	0.11
Chromium, Total	7440-47-3	mg/kg	181	5.1	5.4	1760	396	29	4.8	11	4.7	12	4.3	58	4.5	16	6.9	7.4	7
Copper, Total	7440-50-8	mg/kg	230	9	4.9	1370	513	23	3.7	8.2	2.5	25	2	36	2.6	12	3.6	2.3	5.1
Lead, Total	7439-92-1	mg/kg	51	5.5	3.7	34	97	5.4	2.2	3.2	3.2	6	1.6	7.5	1.7	3.9	2.7	1.8	17
Mercury, Total	7439-97-6	mg/kg	0.3	0.014 J	0.0099 J	0.12	0.41	0.035 J	0.1 U	0.0097 J	0.1 U	0.026 J	0.1 U	0.044 J	0.1 U	0.019 J	0.0096 J	0.1 U	0.029 J
Nickel, Total	7440-02-0	mg/kg	87	8.8	6.4	189	165	15	6.2	9.1	5.5	9.7	4.6	26	4.5	8.9	7	6.2	6.5
Selenium, Total	7782-49-2	mg/kg	0.58	0.11 J	0.33	1.5	1.5	0.041 J	0.17 J	0.14 J	0.1 J	0.19 J	0.088 J	0.33	0.036 J	0.19 J	0.17 J	0.11 J	0.17 J
Silver, Total	7440-22-4	mg/kg	0.34 J	0.043 J	0.048 J	0.14 J	0.8 J	0.04 J	0.042 J	0.04 J	0.033 J	0.035 J	0.023 J	0.036 J	0.028 J	0.04 J	0.048 J	0.035 J	0.035 J
Zinc, Total	7440-66-6	mg/kg	289	20	16	1930	721	55	21	24	10	43	9.4	85	10	65	17	11	18
Chromium(VI)	18540-29-9	mg/kg	9 U	2 U	2 U	34 U	65 U	2.1 U	2 U	2 U	2 U	2 U	2 U	2.2 U	2 U	2 U	0.18 J	0.3 J	2 U
Miscellaneous Parameters:																			
Cyanide, Free	57-12-5	mg/kg	0.5 U	0.5 U	0.5 U	1.3	0.08 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	NA
Cyanide, Total	57-12-5	mg/kg	0.26	0.2 U	0.2 U	23	14	0.3	0.2 U	0.06 J	0.2 U	0.43	0.2 U	1.3	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Fractional Organic Carbon	FOC	%	NA	NA	0.5	NA	NA	NA	NA	0.8	0.2	2.2	0.3	4.5	0.3	9.7	0.9	0.8	1.1
Percent moisture	MOIST	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Solids	SOLID	%	64	89	85	51	50	70	84	88	87	80	86	66	83	NA	NA	NA	NA
Percent Solids	Solids	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	69	87	86	89
Total Organic Carbon	TOC	%	4.7	0.6	NA	8.5	9.2	3.7	0.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:

U = Non-detect, value is reporting limit

J = Estimated value below reporting limit

NA = Parameter not analyzed

B = Blank qualified result

--- = Parameter not analyzed

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location	SD-G2	SD-G2	SD-G3	SD-H1	SD-H1	SD-H1	SD-H2	SD-H2	SD-H2	SD-H2	SD-H3	SD-H3	SD-I1	SD-I1	SD-I1	SD-I1	SD-I2
		Field ID:	SDG2-1227-101603-01	SDG2-1227-101603-02	SDG3-0014-101603-01	SDHI-0012-101603-01	SDHI-1224-101603-01	SDHI-2436-101603-01	SDH2-0012-101603-01	SDH2-1224-101603-01	SDH2-2445-101603-01	SDH2-2445-101603-02	SDH3-0012-101603-01	SDH3-1221-101603-01	SDI1-0012-101503-01	SDI1-1224-101503-01	SDI1-2445-101503-01	SDI1-2445-101503-02	SDI2-0012-101503-01
		Date Sampled:	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003
		Depth (ft):	12 - 27	12 - 27	0 - 14	0 - 12	12 - 0	24 - 36	0 - 12	12 - 0	24 - 45	24 - 45	0 - 12	12 - 21	0 - 12	12 - 0	24 - 45	24 - 45	0 - 12
Volatile Organic Compounds																			
1,1,1,2-Tetrachloroethane	630-20-6	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
1,1,1-Trichloroethane	71-55-6	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
1,1,2-Trichloroethane	79-00-5	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
1,1-Dichloroethane	75-34-3	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	50 J	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
1,1-Dichloroethene	75-35-4	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
1,1-Dichloropropylene	563-58-6	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
1,2,3-Trichlorobenzene	87-61-6	ug/kg	310 U	310 U	360 U	410 U	350 U	290 U	330 U	340 U	290 U	290 U	420 U	270 U	390 U	290 U	280 U	250 U	310 U
1,2,3-Trichloropropane	96-18-4	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
1,2,4-Trichlorobenzene	120-82-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene	95-63-6	ug/kg	62 U	62 U	72 U	68 J	70 U	58 U	66 U	18 J	58 U	59 U	85 U	54 U	78 U	9.2 J	56 U	50 U	62 U
1,2-Dibromo-3-chloropropane	96-12-8	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
1,2-Dichlorobenzene	95-50-1	ug/kg	330 U, 62 U	330 U, 62 U	330 U, 72 U	330 U, 81 U	330 U, 70 U	330 U, 58 U	330 U, 66 U	330 U, 68 U	330 U, 58 U	330 U, 59 U	330 U, 85 U	14 J, 330 U	330 U, 78 U	330 U, 58 U	330 U, 56 U	330 U, 50 U	330 U, 62 U
1,2-Dichloroethane	107-06-2	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
1,2-Dichloroethene	540-59-0	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	78-87-5	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
1,3,5-Trimethylbenzene	108-67-8	ug/kg	62 U	62 U	72 U	46 J	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
1,3-Dichlorobenzene	541-73-1	ug/kg	330 U, 62 U	330 U, 62 U	330 U, 72 U	330 U, 81 U	330 U, 70 U	330 U, 58 U	330 U, 66 U	330 U, 68 U	330 U, 58 U	330 U, 59 U	330 U, 85 U	330 U, 54 U	330 U, 78 U	330 U, 58 U	330 U, 56 U	330 U, 50 U	330 U, 62 U
1,3-Dichloropropane	142-28-9	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
1,4-Dichlorobenzene	106-46-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2-Dichloropropane	594-20-7	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
2-Chlorotoluene	95-49-8	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
2-Hexanone	591-78-6	ug/kg	620 U	620 U	720 U	810 U	700 U	580 U	660 U	680 U	580 U	590 U	850 U	540 U	780 U	580 U	560 U	500 U	620 U
4-Chlorotoluene	106-43-4	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
4-Isopropyltoluene	99-87-6	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
4-Methyl-2-pentanone	108-10-1	ug/kg	620 U	620 U	720 U	810 U	700 U	580 U	660 U	680 U	580 U	590 U	850 U	540 U	780 U	580 U	560 U	500 U	620 U
Acetone	67-64-1	ug/kg	820	310 J	440 J	560 J	880	390 J	430 J	640 J	400 J	400 J	700 J	450 J	400 J	250 J	310 J	500 U	340 J
Acrolein	107-02-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	71-43-2	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	38 J	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
Bromobenzene	108-86-1	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
Bromochloromethane	74-97-5	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
Bromoform	75-25-2	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
Bromomethane	74-83-9	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
Carbon disulfide	75-15-0	ug/kg	620 U	620 U	33 J	810 U	700 U	580 U	660 U	680 U	580 U	590 U	33 J	540 U	27 J	13 J	560 U	500 U	16 J
Carbon tetrachloride	56-23-5	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
Chlorobenzene	108-90-7	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
Chloroethane	75-00-3	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
Chloroform	67-66-3	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
Chloromethane	74-87-3	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
cis-1,2-Dichloroethene	156-59-2	ug/kg	62 U	62 U	20 J	81 U	70 U	58 U	360	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
cis-1,3-Dichloropropene	10061-01-5	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
Dibromochloromethane	124-48-1	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
Dibromomethane	74-95-3	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
Dichlorobromomethane	75-27-4	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
Dichlorodifluoromethane	75-71-8	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
Ethylbenzene	100-41-4	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	14 J	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
Ethylene dibromide	106-93-4	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
Hexachlorobutadiene	87-68-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	98-82-8	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
Methyl ethyl ketone	78-93-3	ug/kg	430 J	560 J	640 J	230 J	600 J	600	580 J	710	410 J	410 J	620 J	590	460 J	350 J	250 J	290 J	400 J
Methyl tert butyl ether	1634-04-4	ug/kg	620 U	620 U	720 U	810 U	700 U	580 U	660 U	680 U	580 U	590 U	850 U	540 U	780 U	580 U	560 U	500 U	620 U
Methylene chloride	75-09-2	ug/kg	41 J	23 J	31 J	41 J	47 J	29 J	120 J	25 J	28 J	28 J	41 J	29 J	62 J	31 J	31 J	46 J	36 J
n-Butylbenzene	104-51-8	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
n-Propylbenzene	103-65-1	ug/kg	62 U	62 U	72 U	19 J	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
Naphthalene	91-20-3	ug/kg	310 U, 330 U	310 U, 330 U	330 U, 360 U	330 U, 410 U	330 U, 350 U	290 U, 330 U	330 U	330 U, 38 J	290 U, 330 U	290 U, 330 U	330 U, 420 U	270 U, 330 U	330 U, 390 U	290 U, 330 U	280 U, 330 U	250 U, 330 U	310 U, 330 U
o-Xylene	95-47-6	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	18 J	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
sec-Butylbenzene	135-98-8	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
Styrene	100-42-5	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
tert-Butylbenzene	98-06-6	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location:	SD-G2	SD-G2	SD-G3	SD-H1	SD-H1	SD-H1	SD-H2	SD-H2	SD-H2	SD-H2	SD-H3	SD-H3	SD-I1	SD-I1	SD-I1	SD-I1	SD-I2
		Field ID:	SDG2-1227-101603-01	SDG2-1227-101603-02	SDG3-0014-101603-01	SDHI-0012-101603-01	SDHI-1224-101603-01	SDHI-2436-101603-01	SDH2-0012-101603-01	SDH2-1224-101603-01	SDH2-2445-101603-01	SDH2-2445-101603-02	SDH3-0012-101603-01	SDH3-1221-101603-01	SDI1-0012-101503-01	SDI1-1224-101503-01	SDI1-2445-101503-01	SDI1-2445-101503-02	SDI2-0012-101503-01
		Date Sampled:	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003
		Depth (ft):	12 - 27	12 - 27	0 - 14	0 - 12	12 - 0	24 - 36	0 - 12	12 - 0	24 - 45	24 - 45	0 - 12	12 - 21	0 - 12	12 - 0	24 - 45	24 - 45	0 - 12
Tetrachloroethene	127-18-4	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
Toluene	108-88-3	ug/kg	62 U	62 U	7.9 J	11 J	70 U	58 U	12 J	140	58 U	11 J	12 J	54 U	13 J	8.1 J	6.7 J	5.8 J	14 J
trans-1,2-Dichloroethylene	156-60-5	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	46 J	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
trans-1,3-Dichloropropene	10061-02-6	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
Trichloroethene	79-01-6	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
Trichlorofluoromethane	75-69-4	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
Vinyl chloride	75-01-4	ug/kg	62 U	62 U	72 U	81 U	70 U	58 U	66 U	68 U	58 U	59 U	85 U	54 U	78 U	58 U	56 U	50 U	62 U
Xylene, Meta + Para	Not Applicable	ug/kg	120 U	120 U	140 U	170 U	140 U	120 U	130 U	39 J	120 U	120 U	170 U	110 U	160 U	120 U	110 U	100 U	120 U
Volatile Organic Compounds																			
1,2,4-Trichlorobenzene	120-82-1	ug/kg	330 U, 62 U	330 U, 62 U	330 U, 72 U	330 U, 81 U	330 U, 70 U	330 U, 58 U	330 U, 66 U	330 U, 68 U	330 U, 58 U	330 U, 59 U	330 U, 85 U	330 U, 54 U	330 U, 78 U	330 U, 58 U	330 U, 56 U	330 U, 50 U	330 U, 62 U
1,2-Benzphenanthracene	218-01-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95-50-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	541-73-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	106-46-7	ug/kg	330 U, 62 U	330 U, 62 U	330 U, 72 U	330 U, 81 U	330 U, 70 U	330 U, 58 U	330 U, 66 U	330 U, 68 U	330 U, 58 U	330 U, 59 U	330 U, 85 U	330 U, 54 U	330 U, 78 U	330 U, 58 U	330 U, 56 U	330 U, 50 U	330 U, 62 U
2,4,5-Trichlorophenol	95-95-4	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4,6-Trichlorophenol	88-06-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4-Dichlorophenol	120-83-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4-Dimethylphenol	105-67-9	ug/kg	330 U	330 U	330 U	330 U	8.8 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4-Dinitrophenol	51-28-5	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
2,4-Dinitrotoluene	121-14-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,6-Dinitrotoluene	606-20-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-Chloronaphthalene	91-58-7	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-Chlorophenol	95-57-8	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-Methylnaphthalene	91-57-6	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-Methylphenol	95-48-7	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-Nitroaniline	88-74-4	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
2-Nitrophenol	88-75-5	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
3,3-Dichlorobenzidine	91-94-1	ug/kg	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U
3,4-Methylphenol	108-39-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	99-09-2	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
4,6-Dinitro-2-methylphenol	534-52-1	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
4-Bromophenyl-phenylether	101-55-3	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-Chloroaniline	106-47-8	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	2.4 J	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
4-Chlorophenyl-phenylether	7005-72-3	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-Methylphenol	106-44-5	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-Nitroaniline	100-01-6	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
4-Nitrophenol	100-02-7	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
Acenaphthene	83-32-9	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Acenaphthylene	208-96-8	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Anthracene	120-12-7	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	29 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	5.3 J
Benz(a)anthracene	56-55-3	ug/kg	330 U	330 U	6.8 J	330 U	6.3 J	330 U	28 J	12 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	28 J
Benzidine	92-87-5	ug/kg	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U
Benzo(a)pyrene	50-32-8	ug/kg	330 U	330 U	9.9 J	330 U	330 U	330 U	28 J	330 U	330 U	330 U	9.4 J	330 U	330 U	330 U	330 U	330 U	23 J
Benzo(b)fluoranthene	205-99-2	ug/kg	330 U	330 U	11 J	330 U	330 U	330 U	41 J	330 U	330 U	330 U	11 J	330 U	330 U	330 U	330 U	330 U	22 J
Benzo(g,h,i)perylene	191-24-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	18 J	3 J	330 U	330 U	3.3 J	330 U	330 U	330 U	330 U	330 U	14 J
Benzo(k)fluoranthene	207-08-9	ug/kg	330 U	330 U	330 U	6 J	330 U	330 U	14 J	330 U	330 U	330 U	5.6 J	330 U	330 U	330 U	330 U	330 U	15 J
Benzoic acid	65-85-0	ug/kg	30 J	8.3 J	3300 U	3300 U	140 J	3300 U	6.4 J	320 J	210 J	140 J	3300 U	3300 U	3300 U	3300 U	5.8 J	3300 U	3300 U
Benzyl alcohol	100-51-6	ug/kg	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U
bis(2-Chloroethoxy)methane	111-91-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
bis(2-Chloroethyl)ether	111-44-4	ug/kg	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
bis(2-Chloroisopropyl)ether	108-60-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
bis(2-Ethylhexyl)phthalate	117-81-7	ug/kg	13 J	11 J	16 J	20 J	260 J	10 J	23 J	200 J	15 J	9 J	49 J	12 J	23 J	19 J	19 J	16 J	13 J
Butyl benzyl phthalate	85-68-7	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	17 J	330 U	6.1 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Carbazole	86-74-8	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	9 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Chrysene	218-01-9	ug/kg	330 U	330 U	9.5 J	6.6 J	9.1 J	330 U	26 J	12 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	26 J
Di-N-Butyl phthalate	84-74-2	ug/kg	27 J	24 J	35 J	37 J	31 J	28 J	29 J	25 J	29 J	30 J	39 J	25 J	57 J	40 J	31 J	40 J	28 J
Di-N-Octyl phthalate	117-84-0	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Dibenz(a,h)anthracene	53-70-3	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Dibenzofuran	132-64-9	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Diethylphthalate	84-66-2	ug/kg	5.1 J	4.5 J	7.8 J	8.2 J	330 U	5.9 J	7.9 J	330 U	6.8 J	6.8 J	13 J	6.6 J	15 J	12 J	8.9 J	9.5 J	11 J

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location:	SD-G2	SD-G2	SD-G3	SD-H1	SD-H1	SD-H1	SD-H2	SD-H2	SD-H2	SD-H2	SD-H3	SD-H3	SD-I1	SD-I1	SD-I1	SD-I1	SD-I2
		Field ID:	SDG2-1227-101603-01	SDG2-1227-101603-02	SDG3-0014-101603-01	SDH1-0012-101603-01	SDH1-1224-101603-01	SDH1-2436-101603-01	SDH2-0012-101603-01	SDH2-1224-101603-01	SDH2-2445-101603-01	SDH2-2445-101603-02	SDH3-0012-101603-01	SDH3-1221-101603-01	SDI1-0012-101503-01	SDI1-1224-101503-01	SDI1-2445-101503-01	SDI1-2445-101503-02	SDI2-0012-101503-01
		Date Sampled:	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/16/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003
		Depth (ft):	12 - 27	12 - 27	0 - 14	0 - 12	12 - 0	24 - 36	0 - 12	12 - 0	24 - 45	24 - 45	0 - 12	12 - 21	0 - 12	12 - 0	24 - 45	24 - 45	0 - 12
Dimethyl phthalate	131-11-3	ug/kg	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	6.5 J	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U
Fluoranthene	206-44-0	ug/kg	330 U	330 U	25 J	13 J	20 J	330 U	62 J	22 J	330 U	330 U	21 J	330 U	330 U	330 U	330 U	330 U	43 J
Fluorene	86-73-7	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Hexachlorobenzene	118-74-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Hexachlorobutadiene	87-68-3	ug/kg	310 U, 330 U	310 U, 330 U	330 U, 360 U	330 U, 410 U	330 U, 350 U	290 U, 330 U	330 U	330 U, 340 U	290 U, 330 U	290 U, 330 U	330 U, 420 U	270 U, 330 U	330 U, 390 U	290 U, 330 U	280 U, 330 U	250 U, 330 U	310 U, 330 U
Hexachlorocyclopentadiene	77-47-4	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Hexachloroethane	67-72-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	18 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	14 J
Isophorone	78-59-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
N-Nitroso-di-N-propylamine	621-64-7	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
N-Nitrosodiphenylamine	86-30-6	ug/kg	330 U	330 U	4.7 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Naphthalene	91-20-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	98-95-3	ug/kg	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
p-Chloro-m-cresol	59-50-7	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Pentachlorophenol	87-86-5	ug/kg	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U
Phenanthrene	85-01-8	ug/kg	330 U	330 U	9.8 J	5.1 J	10 J	330 U	32 J	330 U	330 U	330 U	9.4 J	330 U	330 U	330 U	330 U	330 U	11 J
Phenol	108-95-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	14 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PNAs, Total	TPNA	ug/kg	NA	NA	90	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	129-00-0	ug/kg	330 U	330 U	18 J	11 J	17 J	330 U	53 J	26 J	330 U	330 U	15 J	330 U	330 U	330 U	330 U	330 U	42 J
Polychlorinated Biphenyls (PCBs):																			
PCB-1248	12672-29-6	ug/kg	330 U	330 U	15 J	56 J	170 J	42 J	180 J	72 J	330 U	330 U	33 J	330 U	330 U	330 U	330 U	330 U	12 J
PCB-1254	11097-69-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1260	11096-82-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB, Total	TPCB	ug/kg	NA	NA	15 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1016	12674-11-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1221	11104-28-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1232	11141-16-5	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1242	53469-21-9	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1248	12672-29-6	ug/kg	NA	NA	15 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1254	11097-69-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1260	11096-82-5	ug/kg	330 U	330 U	10 J	23 J	67 J	330 U	49 J	120 J	330 U	330 U	27 J	330 U	330 U	330 U	330 U	330 U	330 U
Total Metals:																			
Aluminum, Total	7429-90-5	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic, Total	7440-38-2	mg/kg	3.6	4.6	6.6	10	8.2	5.3	4.5	6.4	8.9	6.8	11	4.6	8.9	18	6.3	10	4.9
Barium, Total	7440-39-3	mg/kg	6.7	7.2	40	77	49	37	25	28	19	11	54	9.4	54	13	11	8.4	17
Cadmium, Total	7440-43-9	mg/kg	0.027 J	0.049 J	0.2	0.26	0.17	0.14	0.088	0.11	0.059	0.039 J	0.28	0.045 J	0.21	0.068	0.056 J	0.053 J	0.076
Chromium, Total	7440-47-3	mg/kg	4.5	4.8	16	41	771	13	16	99	5.1	5.1	71	6.7	26	9.8	5.2	4.2	10
Copper, Total	7440-50-8	mg/kg	1.8	2.6	15	33	563	11	20	61	2.6	1.7	63	3	17	3.1	3.3	2	2.8
Lead, Total	7439-92-1	mg/kg	1.6	1.9	10	22	14	5.9	4.6	9	2.1	1.7	11	2.1	7.5	2.9	2.4	1.9	5.7
Mercury, Total	7439-97-6	mg/kg	0.1 U	0.1 U	0.044 J	0.053 J	0.03 J	0.019 J	0.017 J	0.062 J	0.012 J	0.1 U	0.049 J	0.1 U	0.057 J	0.015 J	0.0096 J	0.1 U	0.031 J
Nickel, Total	7440-02-0	mg/kg	6.5	7.8	12	26	150	12	41	40	5.3	5.3	45	7.2	11	7.9	7	9.1	6.1
Selenium, Total	7782-49-2	mg/kg	0.23 U	0.11 J	0.27 J	0.36 U	0.38	0.13 J	0.13 J	0.26 J	0.13 J	0.13 J	0.46	0.14 J	0.36	0.12 J	0.16 J	0.29	0.14 J
Silver, Total	7440-22-4	mg/kg	0.023 J	0.041 J	0.047 J	0.06 J	0.049 J	0.083 J	0.047 J	0.09 J	0.037 J	0.03 J	0.06 J	0.038 J	0.061 J	0.046 J	0.039 J	0.038 J	0.033 J
Zinc, Total	7440-66-6	mg/kg	8.9	10	60	79	784	36	101	178	11	9.7	127	11	50	15	11	7.1	19
Chromium(VI)	18540-29-9	mg/kg	2 U	2.1	2 U	0.9 J	2 U	2 U	2 U	2 U	0.13 J	2 U	2 U	0.19 J	2 U	0.42 J	0.34 J	2 U	2 U
Miscellaneous Parameters:																			
Cyanide, Free	57-12-5	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide, Total	57-12-5	mg/kg	0.2 U	0.2 U	0.07 J	1.4	11	0.74	0.24	1.4	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Fractional Organic Carbon	FOC	%	0.3	0.2	11	15	5.5	1.4	1.9	5.3	1.1	1.3	24	0.8	6.4	1.6	0.7	0.6	1.8
Percent moisture	MOIST	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Solids	SOLID	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Solids	Solids	%	87	85	71	57	69	80	82	71	86	85	59	85	63	84	90	90	84
Total Organic Carbon	TOC	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:
U = Non-detect, value is reporting limit
J = Estimated value below reporting limit
NA = Parameter not analyzed
B = Blank qualified result
— = Parameter not analyzed

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location	SD-I2	SD-I2	SD-I3	SD-I3	SD-I3	SD-J1	SD-J1	SD-J1	SD-J2	SD-J2	SD-J3	SD-J3	SD-K1	SD-K2	SD-K2	SD-K1	SD-K3
		Field ID:	SDI2-1224-101503-01	SDI2-2436-101503-01	SDI3-0012-101503-01	SDI3-1231-101503-01	SDI3-1231-101503-02	SDJ1012-042203-01	SDJ11224-042203-01	SDJ11224-042203-02	SDJ2-0012-101503-01	SDJ2-1224-101503-01	SDJ3012-042203-01	SDJ31224-042203-01	SDK1-0012-101503-01	SDK2-0012-101503-01	SDK2-1224-101503-01	SDK1-1224-101503-01	SDK3-0012-101503-01
		Date Sampled:	10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003	4/22/2003	4/22/2003	4/22/2003	10/15/2003	10/15/2003	4/22/2003	4/22/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003
		Depth (ft):	12 - 0	24 - 36	0 - 12	12 - 31	12 - 31	0 - 12	12 - 24	12 - 24	0 - 12	12 - 0	0 - 12	12 - 24	0 - 12	0 - 12	12 - 0	12 - 0	0 - 12
Volatile Organic Compounds																			
1,1,1,2-Tetrachloroethane	630-20-6	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
1,1,1-Trichloroethane	71-55-6	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
1,1,2-Trichloroethane	79-00-5	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
1,1-Dichloroethane	75-34-3	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
1,1-Dichloroethene	75-35-4	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
1,1-Dichloropropylene	563-58-6	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
1,2,3-Trichlorobenzene	87-61-6	ug/kg	280 U	340 U	610 U	290 U	280 U	380 U	290 U	280 U	280 U	320 U	420 U	390 U	400 U	280 U	290 U	380 U	330 U
1,2,3-Trichloropropane	96-18-4	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
1,2,4-Trichlorobenzene	120-82-1	ug/kg	NA	NA	NA	NA	NA	77 U	57 U	56 U	NA	NA	84 U	77 U	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene	95-63-6	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	10 JB	56 U	65 U	84 U	77 U	80 U	56 U	12 J	77 U	11 J
1,2-Dibromo-3-chloropropane	96-12-8	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
1,2-Dichlorobenzene	95-50-1	ug/kg	330 U, 57 U	330 U, 68 U	120 U, 330 U	330 U, 59 U	330 U, 56 U	77 U	57 U	56 U	330 U, 56 U	330 U, 65 U	84 U	77 U	330 U, 80 U	330 U, 56 U	330 U, 59 U	330 U, 77 U	330 U, 67 U
1,2-Dichloroethane	107-06-2	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
1,2-Dichloroethene	540-59-0	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	78-87-5	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
1,3,5-Trimethylbenzene	108-67-8	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
1,3-Dichlorobenzene	541-73-1	ug/kg	330 U, 57 U	330 U, 68 U	120 U, 330 U	330 U, 59 U	330 U, 56 U	77 U	57 U	56 U	330 U, 56 U	330 U, 65 U	84 U	77 U	330 U, 80 U	330 U, 56 U	330 U, 59 U	330 U, 77 U	330 U, 67 U
1,3-Dichloropropane	142-28-9	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
1,4-Dichlorobenzene	106-46-7	ug/kg	NA	NA	NA	NA	NA	77 U	57 U	56 U	NA	NA	84 U	77 U	NA	NA	NA	NA	NA
2,2-Dichloropropane	594-20-7	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
2-Chlorotoluene	95-49-8	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
2-Hexanone	591-78-6	ug/kg	570 U	680 U	1200 U	590 U	560 U	770 U	570 U	560 U	560 U	650 U	840 U	770 U	800 U	560 U	590 U	770 U	670 U
4-Chlorotoluene	106-43-4	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
4-Isopropyltoluene	99-87-6	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
4-Methyl-2-pentanone	108-10-1	ug/kg	570 U	680 U	1200 U	590 U	560 U	770 U	570 U	560 U	560 U	650 U	840 U	770 U	800 U	560 U	590 U	770 U	670 U
Acetone	67-64-1	ug/kg	300 J	320 J	590 J	380 J	460 J	260 JB	190 JB	190 JB	250 J	650 U	340 JB	250 JB	710 J	560 U	300 J	550 J	670 U
Acrolein	107-02-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	71-43-2	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
Bromobenzene	108-86-1	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
Bromochloromethane	74-97-5	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
Bromoform	75-25-2	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
Bromomethane	74-83-9	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
Carbon disulfide	75-15-0	ug/kg	570 U	12 J	1200 U	14 J	560 U	28 J	570 U	560 U	15 J	41 J	840 U	22 J	800 U	560 U	590 U	52 J	670 U
Carbon tetrachloride	56-23-5	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
Chlorobenzene	108-90-7	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
Chloroethane	75-00-3	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
Chloroform	67-66-3	ug/kg	57 U	68 U	120 U	59 U	56 U	14 J	12 J	16 J	56 U	65 U	18 J	15 J	80 U	56 U	59 U	77 U	67 U
Chloromethane	74-87-3	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	16 J	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
cis-1,2-Dichloroethene	156-59-2	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
cis-1,3-Dichloropropene	10061-01-5	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
Dibromochloromethane	124-48-1	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
Dibromomethane	74-95-3	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
Dichlorobromomethane	75-27-4	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
Dichlorodifluoromethane	75-71-8	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
Ethylbenzene	100-41-4	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	8.2 J	77 U	67 U
Ethylene dibromide	106-93-4	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
Hexachlorobutadiene	87-68-3	ug/kg	NA	NA	NA	NA	NA	770 U	570 U	560 U	NA	NA	840 U	770 U	NA	NA	NA	NA	NA
Isopropylbenzene	98-82-8	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
Methyl ethyl ketone	78-93-3	ug/kg	360 J	500 J	640 J	590 U	230 J	150 J	92 J	110 J	290 J	420 J	230 J	170 J	690 J	380 J	450 J	570 J	620 J
Methyl tert butyl ether	1634-04-4	ug/kg	570 U	680 U	1200 U	590 U	560 U	770 U	570 U	560 U	560 U	650 U	840 U	770 U	800 U	560 U	590 U	770 U	670 U
Methylene chloride	75-09-2	ug/kg	30 J	56 J	90 J	29 J	43 J	77 U	57 U	56 U	17 J	54 J	84 U	77 U	27 J	10 J	29 J	38 J	45 J
n-Butylbenzene	104-51-8	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
n-Propylbenzene	103-65-1	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
Naphthalene	91-20-3	ug/kg	280 U, 330 U	330 U, 340 U	330 U, 610 U	290 U, 330 U	280 U, 330 U	12 JB	9 JB	140 U	280 U, 330 U	320 U, 330 U	11 JB	190 U	330 U, 400 U	280 U, 330 U	290 U, 330 U	330 U, 380 U	330 U
o-Xylene	95-47-6	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
sec-Butylbenzene	135-98-8	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
Styrene	100-42-5	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
tert-Butylbenzene	98-06-6	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location	SD-I2	SD-I2	SD-I3	SD-I3	SD-I3	SD-J1	SD-J1	SD-J1	SD-J2	SD-J2	SD-J3	SD-J3	SD-K1	SD-K2	SD-K2	SD-K1	SD-K3
		Field ID:	SDI2-1224-101503-01	SDI2-2436-101503-01	SDI3-0012-101503-01	SDI3-1231-101503-01	SDI3-1231-101503-02	SDJ1012-042203-01	SDJ11224-042203-01	SDJ11224-042203-02	SDJ2-0012-101503-01	SDJ2-1224-101503-01	SDJ3012-042203-01	SDJ31224-042203-01	SDK1-0012-101503-01	SDK2-0012-101503-01	SDK2-1224-101503-01	SDK1-1224-101503-01	SDK3-0012-101503-01
		Date Sampled:	10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003	4/22/2003	4/22/2003	4/22/2003	10/15/2003	10/15/2003	4/22/2003	4/22/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003
		Depth (ft):	12 - 0	24 - 36	0 - 12	12 - 31	12 - 31	0 - 12	12 - 24	12 - 24	0 - 12	12 - 0	0 - 12	12 - 24	0 - 12	0 - 12	12 - 0	12 - 0	0 - 12
Tetrachloroethene	127-18-4	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
Toluene	108-88-3	ug/kg	6 J	68 U	16 J	59 U	56 U	77 U	57 U	56 U	11 J	15 J	84 U	77 U	80 U	56 U	18 J	77 U	17 J
trans-1,2-Dichloroethylene	156-60-5	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
trans-1,3-Dichloropropene	10061-02-6	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
Trichloroethene	79-01-6	ug/kg	57 U	68 U	120 U	59 U	56 U	48 JB	57 U	56 U	56 U	65 U	54 JB	37 JB	80 U	56 U	59 U	77 U	67 U
Trichlorofluoromethane	75-69-4	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
Vinyl chloride	75-01-4	ug/kg	57 U	68 U	120 U	59 U	56 U	77 U	57 U	56 U	56 U	65 U	84 U	77 U	80 U	56 U	59 U	77 U	67 U
Xylene, Meta + Para	Not Applicable	ug/kg	110 U	140 U	240 U	120 U	110 U	150 U	110 U	110 U	110 U	130 U	170 U	150 U	160 U	110 U	22 J	150 U	130 U
Volatile Organic Compounds																			
1,2,4-Trichlorobenzene	120-82-1	ug/kg	330 U, 57 U	330 U, 68 U	120 U, 330 U	330 U, 59 U	330 U, 56 U	330 U	330 U	330 U	330 U, 56 U	330 U, 65 U	330 U	330 U	330 U, 80 U	330 U, 56 U	330 U, 59 U	330 U, 77 U	330 U, 67 U
1,2-Benzphenanthracene	218-01-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95-50-1	ug/kg	NA	NA	NA	NA	NA	330 U	330 U	330 U	NA	NA	330 U	330 U	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	541-73-1	ug/kg	NA	NA	NA	NA	NA	330 U	330 U	330 U	NA	NA	330 U	330 U	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	106-46-7	ug/kg	330 U, 57 U	330 U, 68 U	120 U, 330 U	330 U, 59 U	330 U, 56 U	330 U	330 U	330 U	330 U, 56 U	330 U, 65 U	330 U	330 U	330 U, 80 U	330 U, 56 U	330 U, 59 U	330 U, 77 U	330 U, 67 U
2,4,5-Trichlorophenol	95-95-4	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4,6-Trichlorophenol	88-06-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4-Dichlorophenol	120-83-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4-Dimethylphenol	105-67-9	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,4-Dinitrophenol	51-28-5	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
2,4-Dinitrotoluene	121-14-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2,6-Dinitrotoluene	606-20-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-Chloronaphthalene	91-58-7	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-Chlorophenol	95-57-8	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-Methylnaphthalene	91-57-6	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-Methylphenol	95-48-7	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
2-Nitroaniline	88-74-4	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
2-Nitrophenol	88-75-5	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
3,3-Dichlorobenzidine	91-94-1	ug/kg	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U
3,4-Methylphenol	108-39-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	99-09-2	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
4,6-Dinitro-2-methylphenol	534-52-1	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
4-Bromophenyl-phenylether	101-55-3	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-Chloroaniline	106-47-8	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
4-Chlorophenyl-phenylether	7005-72-3	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-Methylphenol	106-44-5	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
4-Nitroaniline	100-01-6	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
4-Nitrophenol	100-02-7	ug/kg	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U	1700 U
Acenaphthene	83-32-9	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	11 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Acenaphthylene	208-96-8	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Anthracene	120-12-7	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Benz(a)anthracene	56-55-3	ug/kg	330 U	330 U	16 J	330 U	330 U	63 J	330 U	330 U	8 J	6.9 J	330 U	330 U	9.5 J	330 U	330 U	330 U	330 U
Benzidine	92-87-5	ug/kg	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U
Benzo(a)pyrene	50-32-8	ug/kg	330 U	330 U	22 J	330 U	330 U	72 J	330 U	330 U	7.5 J	6.7 J	330 U	330 U	9.5 J	330 U	330 U	330 U	330 U
Benzo(b)fluoranthene	205-99-2	ug/kg	330 U	330 U	20 J	330 U	330 U	89 J	330 U	330 U	9.8 J	7.2 J	330 U	330 U	10 J	330 U	330 U	330 U	330 U
Benzo(g,h,i)perylene	191-24-2	ug/kg	330 U	330 U	15 J	330 U	330 U	330 U	330 U	330 U	6.3 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Benzo(k)fluoranthene	207-08-9	ug/kg	330 U	330 U	21 J	330 U	330 U	74 J	330 U	330 U	8.4 J	7.5 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Benzoic acid	65-85-0	ug/kg	130 J	6.4 J	98 J	8.1 J	11 J	3300 U	3300 U	3300 U	18 J	16 J	3300 U	320 J	35 J	3300 U	3300 U	110 J	3300 U
Benzyl alcohol	100-51-6	ug/kg	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U	1300 U
bis(2-Chloroethoxy)methane	111-91-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
bis(2-Chloroethyl)ether	111-44-4	ug/kg	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
bis(2-Chloroisopropyl)ether	108-60-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
bis(2-Ethylhexyl)phthalate	117-81-7	ug/kg	18 J	18 J	38 J	19 J	17 J	110 J	71 J	330 U	43 J	36 J	90 J	56 J	16 J	9.1 J	9.5 J	13 J	15 J
Butyl benzyl phthalate	85-68-7	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	4.7 J	330 U	330 U	330 U
Carbazole	86-74-8	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Chrysene	218-01-9	ug/kg	330 U	330 U	22 J	330 U	330 U	65 J	330 U	330 U	9 J	6.7 J	330 U	330 U	12 J	330 U	330 U	330 U	330 U
Di-N-Butyl phthalate	84-74-2	ug/kg	34 J	52 J	85 J	35 J	32 J	81 J	330 U	59 J	51 J	330 U	88 J	330 U	21 J	20 J	20 J	26 J	47 J
Di-N-Octyl phthalate	117-84-0	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Dibenz(a,h)anthracene	53-70-3	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Dibenzofuran	132-64-9	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Diethylphthalate	84-66-2	ug/kg	9.4 J	14 J	17 J	7.8 J	6.4 J	330 U	330 U	330 U	14 J	16 J	330 U	330 U	4.5 J	4.3 J	4.1 J	5.3 J	14 J

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location	SD-I2	SD-I2	SD-I3	SD-I3	SD-I3	SD-J1	SD-J1	SD-J1	SD-J2	SD-J2	SD-J3	SD-J3	SD-K1	SD-K2	SD-K2	SD-K1	SD-K3
		Field ID:	SDI2-1224-101503-01	SDI2-2436-101503-01	SDI3-0012-101503-01	SDI3-1231-101503-01	SDI3-1231-101503-02	SDJ1012-042203-01	SDJ11224-042203-01	SDJ11224-042203-02	SDJ2-0012-101503-01	SDJ2-1224-101503-01	SDJ3012-042203-01	SDJ31224-042203-01	SDK1-0012-101503-01	SDK2-0012-101503-01	SDK2-1224-101503-01	SDK1-1224-101503-01	SDK3-0012-101503-01
		Date Sampled:	10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003	4/22/2003	4/22/2003	4/22/2003	10/15/2003	10/15/2003	4/22/2003	4/22/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003	10/15/2003
		Depth (ft):	12 - 0	24 - 36	0 - 12	12 - 31	12 - 31	0 - 12	12 - 24	12 - 24	0 - 12	12 - 0	0 - 12	12 - 24	0 - 12	0 - 12	12 - 0	12 - 0	0 - 12
Dimethyl phthalate	131-11-3	ug/kg	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U	3300 U
Fluoranthene	206-44-0	ug/kg	330 U	330 U	45 J	330 U	330 U	210 J	330 U	330 U	18 J	21 J	330 U	330 U	17 J	330 U	330 U	330 U	330 U
Fluorene	86-73-7	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Hexachlorobenzene	118-74-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Hexachlorobutadiene	87-68-3	ug/kg	280 U, 330 U	330 U, 340 U	330 U, 610 U	290 U, 330 U	280 U, 330 U	330 U	330 U	330 U	280 U, 330 U	320 U, 330 U	330 U	330 U	330 U, 400 U	280 U, 330 U	290 U, 330 U	330 U, 380 U	330 U
Hexachlorocyclopentadiene	77-47-4	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Hexachloroethane	67-72-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	330 U	330 U	14 J	330 U	330 U	330 U	330 U	330 U	5.3 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Isophorone	78-59-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
N-Nitroso-di-N-propylamine	621-64-7	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
N-Nitrosodiphenylamine	86-30-6	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Naphthalene	91-20-3	ug/kg	NA	NA	NA	NA	NA	330 U	330 U	330 U	NA	NA	330 U	330 U	NA	NA	NA	NA	NA
Nitrobenzene	98-95-3	ug/kg	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
p-Chloro-m-cresol	59-50-7	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Pentachlorophenol	87-86-5	ug/kg	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U	800 U
Phenanthrene	85-01-8	ug/kg	330 U	330 U	15 J	330 U	330 U	67 J	330 U	330 U	9.3 J	4.7 J	330 U	330 U	6.5 J	330 U	330 U	330 U	330 U
Phenol	108-95-2	ug/kg	19 J	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PNAs, Total	TPNA	ug/kg	NA	NA	NA	NA	NA	820	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	129-00-0	ug/kg	330 U	330 U	31 J	330 U	330 U	180 J	330 U	330 U	16 J	18 J	330 U	330 U	14 J	330 U	330 U	330 U	330 U
Polychlorinated Biphenyls (PCBs):																			
PCB-1248	12672-29-6	ug/kg	330 U	330 U	27 J	20 J	22 J	NA	NA	NA	19 J	14 J	NA	NA	25 J	330 U	330 U	330 U	330 U
PCB-1254	11097-69-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1260	11096-82-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB, Total	TPCB	ug/kg	NA	NA	NA	NA	NA	126 J	7 J	NA	NA	NA	22.4 J	NA	NA	NA	NA	NA	NA
PCB-1016	12674-11-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1221	11104-28-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1232	11141-16-5	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1242	53469-21-9	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1248	12672-29-6	ug/kg	NA	NA	NA	NA	NA	110 J	7 J	330 U	NA	NA	13 J	330 U	NA	NA	NA	NA	NA
PCB-1254	11097-69-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 UJ	330 U	330 U	330 U	330 U	330 U	330 U
PCB-1260	11096-82-5	ug/kg	330 U	330 U	330 U	330 U	330 U	16 J	330 U	330 U	330 U	330 U	9.4 J	330 U	22 J	330 U	330 U	330 U	330 U
Total Metals:																			
Aluminum, Total	7429-90-5	mg/kg	NA	NA	NA	NA	NA	5260	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic, Total	7440-38-2	mg/kg	3.4	6.4	18	3.4	4.6	8.7	1.7	2.8	8.4	7.2	7.8	14	13	2.3	1.4	9.6	2.1
Barium, Total	7440-39-3	mg/kg	7	11	128	18	18	74	10	8.2	48	29	47	62	114	6.1	5.4	73	8.8
Cadmium, Total	7440-43-9	mg/kg	0.029 J	0.054 J	0.42	0.069	0.081	0.72	0.24	0.23	0.23	0.1	0.45	0.53	0.4	0.031 J	0.041 J	0.25	0.039 J
Chromium, Total	7440-47-3	mg/kg	3.6	4.1	102	13	12	40	7.5	5.3	74	35	40	10	109	4.4	3.7	23	3.5
Copper, Total	7440-50-8	mg/kg	0.8 J	1.2 J	82	11	8	47	5.4	4.1	64	26	34	11	73	2.2	2.2	16	2.6
Lead, Total	7439-92-1	mg/kg	1.5	1.6	17	3.2	3.9	12	2.4	2.1	16	8.3	9.1	6.2	20	1.7	1.6	9.4	1.5
Mercury, Total	7439-97-6	mg/kg	0.012 J	0.012 J	0.12	0.021 J	0.019 J	0.04 J	0.1 U	0.011 J	0.038 J	0.024 J	0.031 J	0.028 J	0.1	0.1 U	0.1 U	0.082 J	0.1 U
Nickel, Total	7440-02-0	mg/kg	3.5	3.8	39	8.9	8.6	26	7.5	6.9	34	20	19	12	29	5.2	4.5	12	5.4
Selenium, Total	7782-49-2	mg/kg	0.33 U	0.13 J	0.65	0.15 J	1.9	0.48	0.43	0.24	0.33	0.18 J	0.43	0.58	0.61	0.11 J	0.091 J	0.51	0.11 J
Silver, Total	7440-22-4	mg/kg	0.019 J	0.023 J	0.13 J	0.045 J	0.058 J	0.092 J	0.049 J	0.028 J	0.12 J	0.037 J	0.087 J	0.073 J	0.077 J	0.025 J	0.02 J	0.078 J	0.024 J
Zinc, Total	7440-66-6	mg/kg	9.9	8.8	114	19	18	89	22	12	108	51	61	34	139	9.2	10	49	11
Chromium(VI)	18540-29-9	mg/kg	2 U	3	26	1.8 J	2 U	2.1 U	2 U	2 U	2 U	2 U	12 U	22 U	2 U	2 U	2 U	2 U	0.51 J
Miscellaneous Parameters:																			
Cyanide, Free	57-12-5	mg/kg	NA	NA	NA	NA	NA	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U	0.5 U	NA	NA	NA	NA	NA
Cyanide, Total	57-12-5	mg/kg	0.2 U	0.2 U	1.5	0.2 U	0.2 U	0.07 J	0.02 J	0.2 U	0.32	0.16 J	0.08 J	0.02 J	0.18 J	0.2 U	0.2 U	0.74	0.2 U
Fractional Organic Carbon	FOC	%	1.1	3.3	27	1.8	1.5	NA	NA	NA	2.7	2.7	NA	NA	48	0.4	0.2	10	0.3
Percent moisture	MOIST	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Solids	SOLID	%	NA	NA	NA	NA	NA	67	85	85	NA	NA	67	73	NA	NA	NA	NA	NA
Percent Solids	Solids	%	82	73	44	82	83	NA	NA	NA	79	79	NA	NA	64	89	84	62	85
Total Organic Carbon	TOC	%	NA	NA	NA	NA	NA	3.3	0.5	0.5	NA	NA	3.8	4.4	NA	NA	NA	NA	NA

NOTES:
U = Non-detect, value is reporting limit
J = Estimated value below reporting limit
NA = Parameter not analyzed
B = Blank qualified result
--- = Parameter not analyzed

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location	SD-K3	SD-L1	SD-L1	SD-L1	SD-L2	SD-L3	SD-L3	SD-M1	SD-M1	SD-M2	SD-M2	SD-M3	SD-M3	SE/RC-1/12	SE/RC-1/3	SE/RC-10/1	SE/RC-10/2
		Field ID:	SDK3-1224-101503-01	SDL1012 052003-01	SDL1012 052003-02	SDL11224 052003-01	SDL2012 052003-01	SDL3012 052003-01	SDL31224 052003-01	SDM1012 052003-01	SDM11224 052003-01	SDM2012 052003-01	SDM21224 052003-01	SDM3012 052003-01	SDM31224 052003-01	SE/RC-1/12	SE/RC-1/3	SE/RC-10/1	SE/RC-10/2
		Date Sampled:	10/15/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	4/1/1991	4/1/1991	1/1/1994	1/1/1994
		Depth (ft):	12 - 0	0 - 12	0 - 12	12 - 24	0 - 12	0 - 12	12 - 24	0 - 12	12 - 24	0 - 12	12 - 24	0 - 12	12 - 24	6 - 12	0 - 3	0 - 3	6 - 12
Volatile Organic Compounds																			
1,1,1,2-Tetrachloroethane	630-20-6	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
1,1,1-Trichloroethane	71-55-6	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	2.9 J	NA	NA	NA
1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
1,1,2-Trichloroethane	79-00-5	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
1,1-Dichloroethane	75-34-3	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	2.6 J	NA	12	6.3
1,1-Dichloroethene	75-35-4	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
1,1-Dichloropropylene	563-58-6	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
1,2,3-Trichlorobenzene	87-61-6	ug/kg	270 U	410 U	400 U	340 U	290 U	290 U	300 U	300 U	300 U	350 U	300 U	410 U	360 U	NA	NA	NA	NA
1,2,3-Trichloropropane	96-18-4	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
1,2,4-Trichlorobenzene	120-82-1	ug/kg	NA	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
1,2,4-Trimethylbenzene	95-63-6	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	96-12-8	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
1,2-Dichlorobenzene	95-50-1	ug/kg	330 U, 55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
1,2-Dichloroethane	107-06-2	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
1,2-Dichloroethene	540-59-0	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	52	NA	5.8 U	110
1,2-Dichloropropane	78-87-5	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
1,3,5-Trimethylbenzene	108-67-8	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
1,3-Dichlorobenzene	541-73-1	ug/kg	330 U, 55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
1,3-Dichloropropane	142-28-9	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
1,4-Dichlorobenzene	106-46-7	ug/kg	NA	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
2,2-Dichloropropane	594-20-7	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
2-Chlorotoluene	95-49-8	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
2-Hexanone	591-78-6	ug/kg	550 U	820 U	810 U	680 U	580 U	570 U	600 U	600 U	600 U	710 U	600 U	820 U	730 U	NA	NA	NA	NA
4-Chlorotoluene	106-43-4	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
4-Isopropyltoluene	99-87-6	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
4-Methyl-2-pentanone	108-10-1	ug/kg	550 U	820 U	810 U	680 U	580 U	570 U	600 U	600 U	600 U	710 U	600 U	820 U	730 U	NA	NA	NA	NA
Acetone	67-64-1	ug/kg	550 U	820 U	810 U	680 U	580 U	570 U	600 U	600 U	600 U	710 U	600 U	820 U	730 U	NA	NA	NA	NA
Acrolein	107-02-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	120 U	120 U
Benzene	71-43-2	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
Bromobenzene	108-86-1	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
Bromochloromethane	74-97-5	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
Bromoform	75-25-2	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
Bromomethane	74-83-9	ug/kg	55 U	130	81 U	61 J	58 U	57 U	60 U	60 U	60 U	71 U	60 U	69 J	73 U	NA	NA	NA	NA
Carbon disulfide	75-15-0	ug/kg	550 U	820 U	810 U	680 U	580 U	570 U	600 U	600 U	600 U	710 U	600 U	820 U	730 U	NA	NA	NA	NA
Carbon tetrachloride	56-23-5	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
Chlorobenzene	108-90-7	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
Chloroethane	75-00-3	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	3.6 J	12 U
Chloroform	67-66-3	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	5.8 U	5.8 U
Chloromethane	74-87-3	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
cis-1,2-Dichloroethene	156-59-2	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
cis-1,3-Dichloropropene	10061-01-5	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
Dibromochloromethane	124-48-1	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
Dibromomethane	74-95-3	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
Dichlorobromomethane	75-27-4	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
Dichlorodifluoromethane	75-71-8	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
Ethylbenzene	100-41-4	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
Ethylene dibromide	106-93-4	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
Hexachlorobutadiene	87-68-3	ug/kg	NA	820 U	810 U	680 U	580 U	570 U	600 U	600 U	600 U	710 U	600 U	820 U	730 U	NA	NA	NA	NA
Isopropylbenzene	98-82-8	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
Methyl ethyl ketone	78-93-3	ug/kg	340 J	820 U	810 U	680 U	580 U	570 U	600 U	600 U	600 U	710 U	600 U	820 U	730 U	NA	NA	NA	NA
Methyl tert butyl ether	1634-04-4	ug/kg	550 U	820 U	810 U	680 U	580 U	570 U	600 U	600 U	600 U	710 U	600 U	820 U	730 U	NA	NA	NA	NA
Methylene chloride	75-09-2	ug/kg	16 J	82 U	81 U	68 U	370	390	400	510	380	530	430	580	470	NA	4.6 BJ	5.8 U	5.8 U
n-Butylbenzene	104-51-8	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
n-Propylbenzene	103-65-1	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
Naphthalene	91-20-3	ug/kg	270 U, 330 U	210 U	200 U	170 U	140 U	140 U	150 U	150 U	150 U	180 U	150 U	200 U	180 U	NA	NA	NA	NA
o-Xylene	95-47-6	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
sec-Butylbenzene	135-98-8	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
Styrene	100-42-5	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
tert-Butylbenzene	98-06-6	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location	SD-K3	SD-L1	SD-L1	SD-L1	SD-L2	SD-L3	SD-L3	SD-M1	SD-M1	SD-M2	SD-M2	SD-M3	SD-M3	SE/RC-1/12	SE/RC-1/3	SE/RC-10/1	SE/RC-10/2
		Field ID:	SDK3-1224-101503-01	SDL1012 052003-01	SDL1012 052003-02	SDL11224 052003-01	SDL2012 052003-01	SDL3012 052003-01	SDL31224 052003-01	SDM1012 052003-01	SDM11224 052003-01	SDM2012 052003-01	SDM21224 052003-01	SDM3012 052003-01	SDM31224 052003-01	SE/RC-1/12	SE/RC-1/3	SE/RC-10/1	SE/RC-10/2
		Date Sampled:	10/15/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	4/1/1991	4/1/1991	1/1/1994	1/1/1994
		Depth (ft):	12 - 0	0 - 12	0 - 12	12 - 24	0 - 12	0 - 12	12 - 24	0 - 12	12 - 24	0 - 12	12 - 24	0 - 12	12 - 24	6 - 12	0 - 3	0 - 3	6 - 12
Tetrachloroethene	127-18-4	ug/kg	22 J	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
Toluene	108-88-3	ug/kg	8.8 J	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	5.8 U	5.8 U
trans-1,2-Dichloroethylene	156-60-5	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
trans-1,3-Dichloropropene	10061-02-6	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
Trichloroethene	79-01-6	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	75	11 J	5.8 U	5.8 U
Trichlorofluoromethane	75-69-4	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	NA	NA
Vinyl chloride	75-01-4	ug/kg	55 U	82 U	81 U	68 U	58 U	57 U	60 U	60 U	60 U	71 U	60 U	82 U	73 U	NA	NA	12 U	13
Xylene, Meta + Para	Not Applicable	ug/kg	110 U	160 U	160 U	140 U	120 U	110 U	120 U	120 U	120 U	140 U	120 U	160 U	150 U	NA	NA	NA	NA
Volatile Organic Compounds																			
1,2,4-Trichlorobenzene	120-82-1	ug/kg	330 U, 55 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
1,2-Benzphenanthracene	218-01-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95-50-1	ug/kg	NA	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
1,3-Dichlorobenzene	541-73-1	ug/kg	NA	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
1,4-Dichlorobenzene	106-46-7	ug/kg	330 U, 55 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
2,4,5-Trichlorophenol	95-95-4	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
2,4,6-Trichlorophenol	88-06-2	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
2,4-Dichlorophenol	120-83-2	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
2,4-Dimethylphenol	105-67-9	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
2,4-Dinitrophenol	51-28-5	ug/kg	1700 U	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	NA	NA	NA	NA
2,4-Dinitrotoluene	121-14-2	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
2,6-Dinitrotoluene	606-20-2	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
2-Chloronaphthalene	91-58-7	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
2-Chlorophenol	95-57-8	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
2-Methylnaphthalene	91-57-6	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
2-Methylphenol	95-48-7	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
2-Nitroaniline	88-74-4	ug/kg	1700 U	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	NA	NA	NA	NA
2-Nitrophenol	88-75-5	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
3,3-Dichlorobenzidine	91-94-1	ug/kg	2000 U	2000 UJ	2000 UJ	2000 UJ	2000 UJ	2000 UJ	2000 UJ	2000 UJ	2000 UJ	2000 UJ	2000 UJ	2000 UJ	2000 UJ	NA	NA	NA	NA
3,4-Methylphenol	108-39-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	99-09-2	ug/kg	1700 U	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	534-52-1	ug/kg	1700 U	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	NA	NA	NA	NA
4-Bromophenyl-phenylether	101-55-3	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
4-Chloroaniline	106-47-8	ug/kg	1700 U	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	NA	NA	NA	NA
4-Chlorophenyl-phenylether	7005-72-3	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
4-Methylphenol	106-44-5	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
4-Nitroaniline	100-01-6	ug/kg	1700 U	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	NA	NA	NA	NA
4-Nitrophenol	100-02-7	ug/kg	1700 U	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	1700 UJ	NA	NA	NA	NA
Acenaphthene	83-32-9	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
Acenaphthylene	208-96-8	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
Anthracene	120-12-7	ug/kg	330 U	93 J	39 J	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	380 U	380 U
Benz(a)anthracene	56-55-3	ug/kg	330 U	370 J	190 J	330 UJ	91 J	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	380 U	380 U
Benzidine	92-87-5	ug/kg	5000 U	5000 UJ	5000 UJ	5000 UJ	5000 UJ	5000 UJ	5000 UJ	5000 UJ	5000 UJ	5000 UJ	5000 UJ	5000 UJ	5000 UJ	NA	NA	NA	NA
Benzo(a)pyrene	50-32-8	ug/kg	330 U	300 J	170 J	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	42 J	330 UJ	55 J	330 UJ	NA	NA	380 U	380 U
Benzo(b)fluoranthene	205-99-2	ug/kg	330 U	420 J	240 J	330 UJ	110 J	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	80 J	330 UJ	390 J	600 J	380 U	380 U
Benzo(g,h,i)perylene	191-24-2	ug/kg	330 U	200 J	74 J	330 UJ	49 J	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	380 U	380 U
Benzo(k)fluoranthene	207-08-9	ug/kg	330 U	190 J	110 J	330 UJ	69 J	330 UJ	330 UJ	330 UJ	330 UJ	36 J	330 UJ	62 J	330 UJ	NA	NA	380 U	380 U
Benzoic acid	65-85-0	ug/kg	3300 U	3300 UJ	3300 UJ	3300 UJ	3300 UJ	3300 UJ	3300 UJ	3300 UJ	3300 UJ	3300 UJ	3300 UJ	3300 UJ	3300 UJ	NA	NA	NA	NA
Benzyl alcohol	100-51-6	ug/kg	1300 U	1300 UJ	1300 UJ	1300 UJ	1300 UJ	1300 UJ	1300 UJ	1300 UJ	1300 UJ	1300 UJ	1300 UJ	1300 UJ	1300 UJ	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	111-91-1	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
bis(2-Chloroethyl)ether	111-44-4	ug/kg	100 U	100 UJ	100 UJ	100 UJ	100 UJ	100 UJ	100 UJ	100 UJ	100 UJ	100 UJ	100 UJ	100 UJ	100 UJ	NA	NA	NA	NA
bis(2-Chloroisopropyl)ether	108-60-1	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	117-81-7	ug/kg	16 J	330 UJ	82 J	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	230 J	700 J	380 U	380 U
Butyl benzyl phthalate	85-68-7	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
Carbazole	86-74-8	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
Chrysene	218-01-9	ug/kg	330 U	350 J	180 J	330 UJ	110 J	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	57 J	330 UJ	220 J	480 J	380 U	380 U
Di-N-Butyl phthalate	84-74-2	ug/kg	35 J	160 J	330 UJ	330 UJ	140 J	340 J	18 J	440 J	370 J	380 J	420 J	260 J	310 J	NA	NA	380 U	380 U
Di-N-Octyl phthalate	117-84-0	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
Dibenz(a,h)anthracene	53-70-3	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
Dibenzofuran	132-64-9	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
Diethylphthalate	84-66-2	ug/kg	11 J	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	380 U	380 U

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location	SD-K3	SD-L1	SD-L1	SD-L1	SD-L2	SD-L3	SD-L3	SD-M1	SD-M1	SD-M2	SD-M2	SD-M3	SD-M3	SE/RC-1/12	SE/RC-1/3	SE/RC-10/1	SE/RC-10/2
		Field ID:	SDK3-1224-101503-01	SDL1012 052003-01	SDL1012 052003-02	SDL11224 052003-01	SDL2012 052003-01	SDL3012 052003-01	SDL31224 052003-01	SDM1012 052003-01	SDM11224 052003-01	SDM2012 052003-01	SDM21224 052003-01	SDM3012 052003-01	SDM31224 052003-01	SE/RC-1/12	SE/RC-1/3	SE/RC-10/1	SE/RC-10/2
		Date Sampled:	10/15/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	5/20/2003	4/1/1991	4/1/1991	1/1/1994	1/1/1994
		Depth (ft):	12 - 0	0 - 12	0 - 12	12 - 24	0 - 12	0 - 12	12 - 24	0 - 12	12 - 24	0 - 12	12 - 24	0 - 12	12 - 24	6 - 12	0 - 3	0 - 3	6 - 12
Dimethyl phthalate	131-11-3	ug/kg	3300 U	3300 UJ	3300 UJ	3300 UJ	3300 UJ	3300 UJ	3300 UJ	3300 UJ	3300 UJ	3300 UJ	3300 UJ	3300 UJ	3300 UJ	NA	NA	380 U	380 U
Fluoranthene	206-44-0	ug/kg	330 U	1000 J	490 J	330 UJ	250 J	330 UJ	330 UJ	330 UJ	330 UJ	85 J	330 UJ	130 J	330 UJ	340 J	NA	380 U	380 U
Fluorene	86-73-7	ug/kg	330 U	57 J	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	380 U	380 U
Hexachlorobenzene	118-74-1	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
Hexachlorobutadiene	87-68-3	ug/kg	270 U, 330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
Hexachlorocyclopentadiene	77-47-4	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
Hexachloroethane	67-72-1	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	330 U	160 J	75 J	330 UJ	41 J	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	380 U	380 U
Isophorone	78-59-1	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	380 U	380 U
N-Nitroso-di-N-propylamine	621-64-7	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
N-Nitrosodiphenylamine	86-30-6	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
Naphthalene	91-20-3	ug/kg	NA	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
Nitrobenzene	98-95-3	ug/kg	200 U	200 UJ	200 UJ	200 UJ	200 UJ	200 UJ	200 UJ	200 UJ	200 UJ	200 UJ	200 UJ	200 UJ	200 UJ	NA	NA	NA	NA
p-Chloro-m-cresol	59-50-7	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
Pentachlorophenol	87-86-5	ug/kg	800 U	800 UJ	800 UJ	800 UJ	800 UJ	800 UJ	800 UJ	800 UJ	800 UJ	800 UJ	800 UJ	800 UJ	800 UJ	NA	NA	NA	NA
Phenanthrene	85-01-8	ug/kg	330 U	580 J	240 J	330 UJ	90 J	330 UJ	330 UJ	330 UJ	330 UJ	30 J	330 UJ	47 J	330 UJ	260 J	NA	380 U	380 U
Phenol	108-95-2	ug/kg	330 U	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	NA	NA	NA	NA
PNAs, Total	TPNA	ug/kg	NA	4450	2168	NA	1010	NA	NA	NA	NA	253	NA	530	NA	1500	1080	NA	NA
Pyrene	129-00-0	ug/kg	330 U	730 J	360 J	330 UJ	200 J	330 UJ	330 UJ	330 UJ	330 UJ	60 J	330 UJ	99 J	330 UJ	290 J	NA	380 U	380 U
Polychlorinated Biphenyls (PCBs):																			
PCB-1248	12672-29-6	ug/kg	330 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	210	80 J	38 U	38 U
PCB-1254	11097-69-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	240	NA	NA	NA
PCB-1260	11096-82-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	38 U	38 U
PCB, Total	TPCB	ug/kg	NA	38 J	33 J	NA	52 J	NA	NA	NA	NA	66 J	NA	NA	NA	450	80 J	NA	NA
PCB-1016	12674-11-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	NA	NA
PCB-1221	11104-28-2	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	NA	NA
PCB-1232	11141-16-5	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	NA	NA
PCB-1242	53469-21-9	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	NA	NA
PCB-1248	12672-29-6	ug/kg	NA	38 J	33 J	330 U	52 J	330 U	330 U	330 U	330 U	66 J	330 U	330 U	330 U	NA	NA	NA	NA
PCB-1254	11097-69-1	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	NA	NA
PCB-1260	11096-82-5	ug/kg	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	NA	NA	NA	NA
Total Metals:																			
Aluminum, Total	7429-90-5	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic, Total	7440-38-2	mg/kg	1.5	6.3	7	4.2	7.4	2.3	0.84	44	2.6	7.3	8.1	7.1	11	11.6	38	18.5	6.9
Barium, Total	7440-39-3	mg/kg	6.3	50	45	13	29	7.8	5.3	31	6.8	30	13	18	17	117	209	8.7	8.3
Cadmium, Total	7440-43-9	mg/kg	0.042 J	0.43	0.4	0.21	0.49	0.22	0.18	0.5	0.22	0.21	0.27	0.3	0.3	1.9	2.5	1.1	0.58 U
Chromium, Total	7440-47-3	mg/kg	3.9	13	9.7	5.1	20	4.6	4.3	17	4.2	15	13	8.8	5.3	55.7	1420	5.3	3.3
Copper, Total	7440-50-8	mg/kg	3.7	11	8.7	4.3	13	3.8	3.3	12	5.4	9.7	8	6.7	4.9	76.3	769	21.8	27.6
Lead, Total	7439-92-1	mg/kg	2.4	7.6	97	3.7	7.9	2.2	1.5	5.9	5.6	5	2.7	4.9	2.9	46.8	64.6	5.1	4.7
Mercury, Total	7439-97-6	mg/kg	0.1 U	0.1	0.072 J	0.1 U	0.26	0.1 U	0.1 U	0.016 J	0.1 U	0.1 U	0.01 J	0.1 U	0.1 U	NA	NA	0.12 U	0.12 U
Nickel, Total	7440-02-0	mg/kg	4.8	6.7	6.9	5.8	13	6.9	4.6	14	5.9	8.9	9.7	8.7	6	37.1	374	8	10.6
Selenium, Total	7782-49-2	mg/kg	0.11 J	0.2 J	0.26 J	0.073 J	0.26	0.073 J	0.052 J	0.23 J	0.13 J	0.2 J	0.16 J	0.34	0.15 J	0.86 J	NA	0.38 J	0.25 J
Silver, Total	7440-22-4	mg/kg	0.031 J	0.043 J	0.033 J	0.027 J	0.066 J	0.023 J	0.59 U	0.06 J	0.021 J	0.66 U	0.02 J	0.029 J	0.039 J	NA	1.1 J	1.2 U	0.37 J
Zinc, Total	7440-66-6	mg/kg	11	43	34	17	44	13	9.5	37	14	33	22	27	17	345	1590	220	28.1
Chromium(VI)	18540-29-9	mg/kg	2 U	2.6 U	3 U	2 U	2 U	2.1 U	2 U	2.1 U	2 U	2 U	2.4 U	1.3 J	2.1 U	NA	NA	NA	NA
Miscellaneous Parameters:																			
Cyanide, Free	57-12-5	mg/kg	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	NA
Cyanide, Total	57-12-5	mg/kg	0.2 U	0.02 U	0.013 J	0.2 U	0.04 J	0.2 U	0.2 U	0.2 U	0.2 U	0.02 J	0.2 U	0.012 J	0.2 U	4.5	4.5	0.58 U	2.8
Fractional Organic Carbon	FOC	%	0.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent moisture	MOIST	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Solids	SOLID	%	NA	67	64	81	83	88	86	85	88	76	82	68	74	NA	NA	NA	NA
Percent Solids	Solids	%	85	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	TOC	%	NA	6.2	5.7	1	1.3	0.3	7.2	1	0.3	2.3	1.6	2.9	2.5	NA	NA	NA	NA

NOTES:
U = Non-detect, value is reporting limit
J = Estimated value below reporting limit
NA = Parameter not analyzed
B = Blank qualified result
--- = Parameter not analyzed

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location	SE/RC-2/12	SE/RC-2/3	SE/RC-3/12	SE/RC-3/12	SE/RC-3/3	SE/RC-4/12	SE/RC-4/3	SE/RC-5/12	SE/RC-5/3	SE/RC-6/1	SE/RC-6/2	SE/RC-7/1	SE/RC-7/2	SE/RC-8/1	SE/RC-8/2	SE/RC-9/1	SE/RC-9/2
		Field ID:	SE/RC-2/12	SE/RC-2/3	SE/RC-3/12	SE/RC-6/12	SE/RC-3/3	SE/RC-4/12	SE/RC-4/3	SE/RC-5/12	SE/RC-5/3	SE/RC-6/1	SE-RC-6/2	SE/RC-7/1	SE/RC-7/2	SE/RC-8/1	SE/RC-8/2	SE/RC-9/1	SE/RC-9/2
		Date Sampled:	4/1/1991	4/1/1991	4/1/1991	4/1/1991	4/1/1991	4/1/1991	4/1/1991	4/1/1991	4/1/1991	1/1/1994	1/1/1994	1/1/1994	1/1/1994	1/1/1994	1/1/1994	1/1/1994	1/1/1994
		Depth (ft):	6 - 12	0 - 3	6 - 12	6 - 12	0 - 3	6 - 12	0 - 3	6 - 12	0 - 3	6 - 12	6 - 12	0 - 3	6 - 12	0 - 3	6 - 12	0 - 3	6 - 12
Volatile Organic Compounds																			
1,1,1,2-Tetrachloroethane	630-20-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	71-55-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	79-00-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	75-34-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.6 U	7.2 U	7.7 U	8.4 U	17 U	6.7 U	7.4 U	7.4 U
1,1-Dichloroethene	75-35-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloropropylene	563-58-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	87-61-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichloropropane	96-18-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	120-82-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene	95-63-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	96-12-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95-50-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	107-06-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethene	540-59-0	ug/kg	30	NA	NA	NA	NA	NA	NA	NA	NA	9.6 U	7.2 U	7.7 U	8.4 U	17 U	6.7 U	7.4 U	7.4 U
1,2-Dichloropropane	78-87-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	108-67-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	541-73-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichloropropane	142-28-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	106-46-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2-Dichloropropane	594-20-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	95-49-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	591-78-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	106-43-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Isopropyltoluene	99-87-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	108-10-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	67-64-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acrolein	107-02-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	190 U	140 U	150 U	170 U	350 U	130 U	150 U	150 U
Benzene	71-43-2	ug/kg	27	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromobenzene	108-86-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromochloromethane	74-97-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	75-25-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromomethane	74-83-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	75-15-0	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	56-23-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	108-90-7	ug/kg	NA	NA	NA	NA	14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroethane	75-00-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	19 U	14 U	15 U	17 U	35 U	13 U	15 U	15 U
Chloroform	67-66-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.6 U	7.2 U	7.7 U	2.3 J	17 U	6.7 U	7.4 U	7.4 U
Chloromethane	74-87-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	156-59-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	10061-01-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	124-48-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromomethane	74-95-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorobromomethane	75-27-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	75-71-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	100-41-4	ug/kg	30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylene dibromide	106-93-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	87-68-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	98-82-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl ethyl ketone	78-93-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert butyl ether	1634-04-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	75-09-2	ug/kg	2.9 BJ	830 BJ	12 BJ	15 BJ	3.6 BJ	10	4 J	6.4 BJ	16 BJ	9.6 U	7.2 U	7.7 U	2.4 J	17 U	1.6 J	7.4 U	3.1 J
n-Butylbenzene	104-51-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	103-65-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	91-20-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	95-47-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	135-98-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	100-42-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	98-06-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location	SE/RC-2/12	SE/RC-2/3	SE/RC-3/12	SE/RC-3/12	SE/RC-3/3	SE/RC-4/12	SE/RC-4/3	SE/RC-5/12	SE/RC-5/3	SE/RC-6/1	SE/RC-6/2	SE/RC-7/1	SE/RC-7/2	SE/RC-8/1	SE/RC-8/2	SE/RC-9/1	SE/RC-9/2
		Field ID:	SE/RC-2/12	SE/RC-2/3	SE/RC-3/12	SE/RC-6/12	SE/RC-3/3	SE/RC-4/12	SE/RC-4/3	SE/RC-5/12	SE/RC-5/3	SE/RC-6/1	SE-RC-6/2	SE/RC-7/1	SE/RC-7/2	SE/RC-8/1	SE/RC-8/2	SE/RC-9/1	SE/RC-9/2
		Date Sampled:	4/1/1991	4/1/1991	4/1/1991	4/1/1991	4/1/1991	4/1/1991	4/1/1991	4/1/1991	4/1/1991	1/1/1994	1/1/1994	1/1/1994	1/1/1994	1/1/1994	1/1/1994	1/1/1994	1/1/1994
		Depth (ft):	6 - 12	0 - 3	6 - 12	6 - 12	0 - 3	6 - 12	0 - 3	6 - 12	0 - 3	6 - 12	6 - 12	0 - 3	6 - 12	0 - 3	6 - 12	0 - 3	6 - 12
Tetrachloroethene	127-18-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	108-88-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.6 U	7.2 U	7.7 U	2 J	17 U	6.7 U	7.4 U	17
trans-1,2-Dichloroethylene	156-60-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	10061-02-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	79-01-6	ug/kg	4.1 J	NA	NA	NA	NA	NA	NA	NA	NA	9.6 U	7.2 U	7.7 U	8.4 U	17 U	6.7 U	7.4 U	7.4 U
Trichlorofluoromethane	75-69-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	75-01-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	19 U	14 U	15 U	17 U	35 U	13 U	15 U	15 U
Xylene, Meta + Para	Not Applicable	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Volatile Organic Compounds																			
1,2,4-Trichlorobenzene	120-82-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Benzphenanthracene	218-01-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95-50-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	541-73-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	106-46-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	95-95-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	88-06-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	120-83-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	105-67-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	51-28-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	121-14-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	606-20-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	91-58-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	95-57-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	91-57-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	95-48-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	88-74-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	88-75-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3-Dichlorobenzidine	91-94-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,4-Methylphenol	108-39-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	99-09-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	534-52-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl-phenylether	101-55-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	106-47-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylether	7005-72-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	106-44-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	100-01-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	100-02-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	83-32-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	208-96-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	120-12-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	630 U	480 U	130 J	2200 U	1200 U	440 U	490 U	980 U
Benz(a)anthracene	56-55-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	130 J	630 U	480 U	420 J	510 J	290 J	440 U	490 U	980 U
Benzidine	92-87-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	50-32-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	110 J	75	380 J	570 J	360 J	100 J	51 J	980 U
Benzo(b)fluoranthene	205-99-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 J	480 U	690	850 J	590 J	210 J	110 J	130 J
Benzo(g,h,i)perylene	191-24-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	630 U	480 U	250 J	390 J	230 J	80 J	490 U	980 U
Benzo(k)fluoranthene	207-08-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	630 U	480 U	510 U	2200 U	1200 U	440 U	490 U	980 U
Benzoic acid	65-85-0	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzyl alcohol	100-51-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	111-91-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	111-44-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroisopropyl)ether	108-60-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	117-81-7	ug/kg	2000	2000 J	4000 J	5200	2000 J	2000	2000	NA	1000	630 U	480 U	1100	5800	410 J	93 J	760	4900
Butyl benzyl phthalate	85-68-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	86-74-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	218-01-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	230 J	65 J	480 U	510	740 J	550 J	150 J	93 J	110 J
Di-N-Butyl phthalate	84-74-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	630 U	480 U	510 U	1100 J	1200 U	260 J	490 U	500 J
Di-N-Octyl phthalate	117-84-0	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	53-70-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	132-64-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethylphthalate	84-66-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	630 U	480 U	510 U	1200 J	1200 U	440 U	490 U	980 U

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location	SE/RC-2/12	SE/RC-2/3	SE/RC-3/12	SE/RC-3/12	SE/RC-3/3	SE/RC-4/12	SE/RC-4/3	SE/RC-5/12	SE/RC-5/3	SE/RC-6/1	SE/RC-6/2	SE/RC-7/1	SE/RC-7/2	SE/RC-8/1	SE/RC-8/2	SE/RC-9/1	SE/RC-9/2
		Field ID:	SE/RC-2/12	SE/RC-2/3	SE/RC-3/12	SE/RC-6/12	SE/RC-3/3	SE/RC-4/12	SE/RC-4/3	SE/RC-5/12	SE/RC-5/3	SE/RC-6/1	SE-RC-6/2	SE/RC-7/1	SE/RC-7/2	SE/RC-8/1	SE/RC-8/2	SE/RC-9/1	SE/RC-9/2
		Date Sampled:	4/1/1991	4/1/1991	4/1/1991	4/1/1991	4/1/1991	4/1/1991	4/1/1991	4/1/1991	4/1/1991	1/1/1994	1/1/1994	1/1/1994	1/1/1994	1/1/1994	1/1/1994	1/1/1994	1/1/1994
		Depth (ft):	6 - 12	0 - 3	6 - 12	6 - 12	0 - 3	6 - 12	0 - 3	6 - 12	0 - 3	6 - 12	6 - 12	0 - 3	6 - 12	0 - 3	6 - 12	0 - 3	6 - 12
Dimethyl phthalate	131-11-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	630 U	480 U	510 U	2200 U	1200 U	440 U	490 U	980 U
Fluoranthene	206-44-0	ug/kg	NA	NA	680 J	610 J	NA	NA	NA	NA	470 J	130 J	480 U	950	1500 J	880 J	440 U	180 J	190 J
Fluorene	86-73-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	630 U	480 U	67 J	2200 U	1200 U	440 U	490 U	980 U
Hexachlorobenzene	118-74-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	87-68-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	77-47-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	67-72-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	630 U	480 U	210 J	370 J	220 J	53 J	490 U	980 U
Isophorone	78-59-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	630 U	480 U	510 U	2200 U	1200 U	440 U	51 J	980 U
N-Nitroso-di-N-propylamine	621-64-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	86-30-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	91-20-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	98-95-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Chloro-m-cresol	59-50-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87-86-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	85-01-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	230 J	68 J	480 U	640	840 J	290 J	190 J	73 J	980 U
Phenol	108-95-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PNAs, Total	TPNA	ug/kg	NA	NA	1430	1240	NA	NA	NA	NA	1520	603	75	5247	6870	4080	1063	677	630
Pyrene	129-00-0	ug/kg	NA	NA	750 J	630 J	NA	NA	NA	NA	460 J	130 J	480 U	1000	1100 J	670 J	280 J	170 J	200 J
Polychlorinated Biphenyls (PCBs):																			
PCB-1248	12672-29-6	ug/kg	27 J	800	4900 J	11000	NA	78	230	89	6500	63 U	48 U	200	590	130	87	230	410
PCB-1254	11097-69-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1260	11096-82-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	63 U	48 U	58	220 U	120 U	44 U	110	290
PCB, Total	TPCB	ug/kg	27 J	800	4900 J	11000	NA	78	230	89	6500	NA	NA	258	590	130	87	440	700
PCB-1016	12674-11-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1221	11104-28-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1232	11141-16-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1242	53469-21-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1248	12672-29-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1254	11097-69-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1260	11096-82-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals:																			
Aluminum, Total	7429-90-5	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic, Total	7440-38-2	mg/kg	4.6	19.7	4.2	5.2	7.4	11.7	9	5.2	11.3	9.2	9.2	6.1	11.1	19.5	7.8	5.6	3.8
Barium, Total	7440-39-3	mg/kg	23.2	79.5	256	184	112	30.2	50.6	26.4	75.3	55.9	39	47.1	96.4	187	20.7	35.7	34.1
Cadmium, Total	7440-43-9	mg/kg	NA	1.3	NA	0.77	1.4	NA	NA	NA	0.77 J	0.96 U	0.72 U	0.77 U	0.84 U	1.9	0.67 U	0.74 U	0.74 U
Chromium, Total	7440-47-3	mg/kg	11	240	252	448	74.8	17.7	28.6	14.9	451	19.2	7.2	200	690	55.1	10.1	170	558
Copper, Total	7440-50-8	mg/kg	12.2	227	421	713	114	NA	NA	12.7	302	13.4	8.1	175	622	69.2	10.4	108	293
Lead, Total	7439-92-1	mg/kg	7	27.2	8.8	18.2	10.9	2.3	9.7	4.4	32.6	6.1	2.7	18.5	77.3	33.8	8.3	8.6	9.5
Mercury, Total	7439-97-6	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.19 U	0.14 U	0.15 U	0.19	0.35 U	0.13 U	0.15 U	0.16
Nickel, Total	7440-02-0	mg/kg	13.2	133	349	432	77.9	9.4	15.6	7.4	87.9	4.6 J	4.4 J	62.2	267	24.5	7.1	67.1	117
Selenium, Total	7782-49-2	mg/kg	NA	NA	0.51 J	NA	NA	NA	NA	NA	NA	0.42 J	0.72 U	0.77 U	0.47 J	0.87 J	1.3 U	0.74 U	0.74 U
Silver, Total	7440-22-4	mg/kg	0.35 J	0.8 J	0.53 J	0.49 J	0.61 J	1.2 J	NA	NA	1.3 J	1.1 J	0.96 J	0.74 J	0.91 J	2.2 J	0.5 J	0.77 J	0.56 J
Zinc, Total	7440-66-6	mg/kg	26.4	232	921	2120	658	30.2	60.9	32.9	425	80	23.4	163	466	160	27.7	152	463
Chromium(VI)	18540-29-9	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous Parameters:																			
Cyanide, Free	57-12-5	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide, Total	57-12-5	mg/kg	NA	1.2	11.8	17.1	NA	NA	NA	NA	1.7	0.96 U	0.84	2	8.4	1.7 U	0.67 U	0.74 U	1.5
Fractional Organic Carbon	FOC	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent moisture	MOIST	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Solids	SOLID	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Solids	Solids	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	TOC	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:
U = Non-detect, value is reporting limit
J = Estimated value below reporting limit
NA = Parameter not analyzed
B = Blank qualified result
--- = Parameter not analyzed

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location	SE/RC-11/1	SE/RC-11/2	SE/RC-12/1	SE/RC-12/2	SE/RC-13/1	SE/RC-13/2	SE/RC-13/2	SE/RC-100/1	SE/RC-101/1	SE/RC-102/1	SE/RC-103/1	SE/RC-14/1	SE/RC-15/1	SE/RC-15/2	SE/RC-16/1	SE/RC-17/1	SE/RC-17/2
		Field ID:	SE/RC-11/1	SE/RC-11/2	SE/RC-12/1	SE/RC-12/2	SE/RC-13/1	SE/RC-13/2	SE/RC-13/2 Dup	SE/RC-100/1	SE/RC-101/1	SE/RC-102/1	SE/RC-103/1	SRC-14/136787	SRC-15/136787	SRC-15/236787	SRC-16/136787	SRC-17/136787	SRC-17/236787
		Date Sampled:	1/1/1994	1/1/1994	1/1/1994	1/1/1994	1/1/1994	1/1/1994	1/1/1994	9/1/2000	9/1/2000	9/1/2000	9/1/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000
		Depth (ft):	0 - 3	6 - 12	0 - 3	6 - 12	0 - 3	6 - 12	6 - 12	0 - 3	0 - 3	0 - 3	0 - 3	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0
Volatile Organic Compounds																			
1,1,1,2-Tetrachloroethane	630-20-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	71-55-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	79-00-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	75-34-3	ug/kg	5.8 J	5.6 U	16 U	6.7 U	8.4 U	9.6 U	8.3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	75-35-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloropropylene	563-58-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	87-61-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichloropropane	96-18-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	120-82-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene	95-63-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	96-12-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95-50-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	107-06-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethene	540-59-0	ug/kg	81	30	16 U	6.7 U	8.4 U	9.6 U	8.3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	78-87-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	108-67-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	541-73-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichloropropane	142-28-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	106-46-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2-Dichloropropane	594-20-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	95-49-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	591-78-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	106-43-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Isopropyltoluene	99-87-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	108-10-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	67-64-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acrolein	107-02-8	ug/kg	200 U	5.2 J	330 U	130 U	170 U	190 U	170 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	71-43-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromobenzene	108-86-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromochloromethane	74-97-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	75-25-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromomethane	74-83-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	75-15-0	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	56-23-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	108-90-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroethane	75-00-3	ug/kg	20 U	11 U	33 U	13 U	17 U	19 U	17 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	67-66-3	ug/kg	10 U	5.6 U	16 U	6.7 U	8.4 U	9.6 U	8.3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloromethane	74-87-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	156-59-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	10061-01-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	124-48-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromomethane	74-95-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorobromomethane	75-27-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	75-71-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	100-41-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylene dibromide	106-93-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	87-68-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	98-82-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl ethyl ketone	78-93-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert butyl ether	1634-04-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	75-09-2	ug/kg	10 U	2.1 J	16 U	6.7 U	2.9 J	9.6 U	180	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Butylbenzene	104-51-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	103-65-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	91-20-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	95-47-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	135-98-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	100-42-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	98-06-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location	SE/RC-11/1	SE/RC-11/2	SE/RC-12/1	SE/RC-12/2	SE/RC-13/1	SE/RC-13/2	SE/RC-13/2	SE/RC-100/1	SE/RC-101/1	SE/RC-102/1	SE/RC-103/1	SE/RC-14/1	SE/RC-15/1	SE/RC-15/2	SE/RC-16/1	SE/RC-17/1	SE/RC-17/2
		Field ID:	SE/RC-11/1	SE/RC-11/2	SE/RC-12/1	SE/RC-12/2	SE/RC-13/1	SE/RC-13/2	SE/RC-13/2 Dup	SE/RC-100/1	SE/RC-101/1	SE/RC-102/1	SE/RC-103/1	SRC-14/136787	SRC-15/136787	SRC-15/236787	SRC-16/136787	SRC-17/136787	SRC-17/236787
		Date Sampled:	1/1/1994	1/1/1994	1/1/1994	1/1/1994	1/1/1994	1/1/1994	1/1/1994	9/1/2000	9/1/2000	9/1/2000	9/1/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000
		Depth (ft):	0 - 3	6 - 12	0 - 3	6 - 12	0 - 3	6 - 12	6 - 12	0 - 3	0 - 3	0 - 3	0 - 3	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0
Tetrachloroethene	127-18-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	108-88-3	ug/kg	3 J	5.6 U	16 U	2.5 J	8.4 U	9.6 U	8.3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethylene	156-60-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	10061-02-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	79-01-6	ug/kg	9.4 J	11	16 U	6.7 U	8.4 U	9.6 U	8.3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	75-69-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	75-01-4	ug/kg	20 U	11 U	33 U	13 U	17 U	19 U	17 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylene, Meta + Para	Not Applicable	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Volatile Organic Compounds																			
1,2,4-Trichlorobenzene	120-82-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Benzphenanthracene	218-01-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	69 U	170 J	150 J	220 J	280 J	89 U
1,2-Dichlorobenzene	95-50-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	541-73-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	106-46-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	95-95-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	88-06-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	120-83-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	105-67-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	51-28-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	121-14-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	606-20-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	91-58-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	95-57-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	91-57-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	420 U	450 U	370 U	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	95-48-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	88-74-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	88-75-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3-Dichlorobenzidine	91-94-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,4-Methylphenol	108-39-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	420 U	450 U	370 U	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	99-09-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	534-52-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl-phenylether	101-55-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	106-47-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylether	7005-72-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	106-44-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	100-01-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	100-02-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	83-32-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	45 U	51 U	47 U	48 U	59 U	58 U
Acenaphthylene	208-96-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	47 U	53 U	49 U	51 U	62 U	61 U
Anthracene	120-12-7	ug/kg	67 J	370 U	540 U	440 U	5600 U	6300 U	550 U	420 U	450 U	370 U	450 U	69 U	77 U	72 U	74 U	89 U	88 U
Benz(a)anthracene	56-55-3	ug/kg	230 J	370 U	540 U	440 U	5600 U	6300 U	550 U	80 J	450 U	370 U	120 J	55 U	140 J	120 J	190 J	190 J	71 U
Benzidine	92-87-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	50-32-8	ug/kg	260 J	370 U	220 J	67 J	5600 U	6300 U	550 U	65 J	450 U	370 U	130 J	61 U	150 J	120 J	200 J	210 J	79 U
Benzo(b)fluoranthene	205-99-2	ug/kg	260 J	370 U	540 U	87 J	5600 U	6300 U	550 U	66 J	450 U	370 U	170 J	49 U	150 J	120 J	180 J	190 J	63 U
Benzo(g,h,i)perylene	191-24-2	ug/kg	160 J	370 U	540 U	440 U	5600 U	6300 U	550 U	420 U	450 U	370 U	110 J	56 U	96 J	70 J	140 J	130 J	72 U
Benzo(k)fluoranthene	207-08-9	ug/kg	270 J	370 U	540 U	440 U	5600 U	6300 U	550 U	420 U	450 U	370 U	450 U	100 U	140 J	110 U	170 J	180 J	130 U
Benzoic acid	65-85-0	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzyl alcohol	100-51-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	111-91-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	111-44-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroisopropyl)ether	108-60-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	117-81-7	ug/kg	110 J	370 U	540 U	440 U	5600 U	6300 U	550 U	NA	450 U	370 U	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	85-68-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	86-74-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	218-01-9	ug/kg	350 J	370 U	540 U	71 J	5600 U	6300 U	550 U	85 J	450 U	370 U	160 J	NA	NA	NA	NA	NA	NA
Di-N-Butyl phthalate	84-74-2	ug/kg	660 U	370 U	540 U	440 U	5600 U	6300 U	550 U	NA	450 U	370 U	NA	NA	NA	NA	NA	NA	NA
Di-N-Octyl phthalate	117-84-0	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	53-70-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	67 U	76 U	70 U	72 U	87 U	86 U
Dibenzofuran	132-64-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethylphthalate	84-66-2	ug/kg	660 U	370 U	540 U	440 U	5600 U	6300 U	550 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location	SE/RC-11/1	SE/RC-11/2	SE/RC-12/1	SE/RC-12/2	SE/RC-13/1	SE/RC-13/2	SE/RC-13/2	SE/RC-100/1	SE/RC-101/1	SE/RC-102/1	SE/RC-103/1	SE/RC-14/1	SE/RC-15/1	SE/RC-15/2	SE/RC-16/1	SE/RC-17/1	SE/RC-17/2
		Field ID:	SE/RC-11/1	SE/RC-11/2	SE/RC-12/1	SE/RC-12/2	SE/RC-13/1	SE/RC-13/2	SE/RC-13/2 Dup	SE/RC-100/1	SE/RC-101/1	SE/RC-102/1	SE/RC-103/1	SRC-14/136787	SRC-15/136787	SRC-15/236787	SRC-16/136787	SRC-17/136787	SRC-17/236787
		Date Sampled:	1/1/1994	1/1/1994	1/1/1994	1/1/1994	1/1/1994	1/1/1994	1/1/1994	9/1/2000	9/1/2000	9/1/2000	9/1/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000
		Depth (ft):	0 - 3	6 - 12	0 - 3	6 - 12	0 - 3	6 - 12	6 - 12	0 - 3	0 - 3	0 - 3	0 - 3	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0
Dimethyl phthalate	131-11-3	ug/kg	660 U	370 U	540 U	440 U	5600 U	6300 U	550 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	206-44-0	ug/kg	560 J	370 U	72 J	160 J	5600 U	6300 U	550 U	130 J	450 U	370 U	270 J	74 U	370 J	300 J	430 J	570	100 J
Fluorene	86-73-7	ug/kg	660 U	370 U	540 U	440 U	5600 U	6300 U	550 U	420 U	450 U	370 U	450 U	53 U	60 U	56 U	57 U	69 U	69 U
Hexachlorobenzene	118-74-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	87-68-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	77-47-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	67-72-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	160 J	370 U	540 U	440 U	5600 U	6300 U	550 U	420 U	450 U	370 U	83 J	69 U	91 J	72 U	120 J	110 J	88 U
Isophorone	78-59-1	ug/kg	660 U	370 U	540 U	440 U	5600 U	6300 U	550 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-N-propylamine	621-64-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	86-30-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	91-20-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	420 U	450 U	370 U	450 U	66 U	74 U	69 U	71 U	86 U	85 U
Nitrobenzene	98-95-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Chloro-m-cresol	59-50-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87-86-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	85-01-8	ug/kg	240 J	370 U	540 U	120 J	5600 U	6300 U	550 U	420 U	450 U	370 U	130 J	54 U	210 J	140 J	280 J	430 J	70 U
Phenol	108-95-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PNAs, Total	TPNA	ug/kg	2987	NA	359	625	NA	NA	NA	546	NA	NA	1463	67	1607	1080	2180	2450	185
Pyrene	129-00-0	ug/kg	430 J	370 U	67 J	120 J	5600 U	6300 U	550 U	120 J	450 U	370 U	290 J	67 J	260 J	210 J	470	440 J	85 J
Polychlorinated Biphenyls (PCBs):																			
PCB-1248	12672-29-6	ug/kg	66 U	37 U	54 U	44 U	56 U	63 U	55 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1254	11097-69-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1260	11096-82-5	ug/kg	66 U	37 U	54 U	44 U	56 U	63 U	55 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB, Total	TPCB	ug/kg	NA	NA	NA	NA	NA	NA	NA	14 J	97	NA	NA	NA	21 J	44	33 J	310	105 J
PCB-1016	12674-11-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	14 U	16 U	15 U	15 U	19 U	18 U
PCB-1221	11104-28-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	11 U	12 U	11 U	12 U	14 U	14 U
PCB-1232	11141-16-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.4 U	5 U	4.6 U	4.7 U	5.7 U	5.7 U
PCB-1242	53469-21-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.3 U	4.8 U	4.5 U	4.6 U	5.6 U	5.5 U
PCB-1248	12672-29-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	14 J	97	37 U	45 U	5.4 U	21 J	44	33 J	110	66
PCB-1254	11097-69-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	42 U	45 U	37 U	45 U	6 U	6.7 U	6.2 U	6.4 U	7.8 U	7.7 U
PCB-1260	11096-82-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	42 U	45 U	37 U	45 U	23 U	26 U	24 U	25 U	200	39 J
Total Metals:																			
Aluminum, Total	7429-90-5	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic, Total	7440-38-2	mg/kg	13.3	35.8	13.7	3.7	9.4	12.5	9.9	3	10.3	4.4	3.8	6.9	3.4	4.1	4.3	8.3	10.3
Barium, Total	7440-39-3	mg/kg	87.2	31.1	50.8	21	64.3	73.8	53.9	20.1	72.9	15.1	32.5	25.8	32.7	60	21.6	63.6	46.9
Cadmium, Total	7440-43-9	mg/kg	2	1.1	0.82 U	0.67 U	0.84 U	0.96 U	0.83 U	0.64 U	0.68 U	0.56 U	0.2 J	0.18 B	0.15 U	0.16 B	0.14 U	0.23 B	0.2 B
Chromium, Total	7440-47-3	mg/kg	8.2	8.3	8	5	10.5	12.3	6.5	12.5	18	6	6.3	10.8	8.2	26	18.1	404	78.5
Copper, Total	7440-50-8	mg/kg	21.7	10.4	11.9	6.2	16.4	13.9	8.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead, Total	7439-92-1	mg/kg	15.6	4.7	10.6	4.4	9.1	10	7.4	3.1	6.2	3.3	10.8	3.4	3.8	10.3	6	23.3	7.4
Mercury, Total	7439-97-6	mg/kg	0.2 U	0.11 U	0.16 U	0.13 U	0.17 U	0.19 U	0.17 U	0.011 J	0.0053 J	0.0074 J	0.021 J	0.02 B	0.019 B	0.033 B	0.026 B	0.06	0.033 B
Nickel, Total	7440-02-0	mg/kg	8	7.5	8.2	5.8	9.4	11.6	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium, Total	7782-49-2	mg/kg	1 U	1.1 U	1.3 J	0.43 J	0.84 U	0.96 U	0.36 J	1.7 U	1.8 U	1.5 U	1.8 U	0.58 U	0.66 U	0.96 B	0.63 U	0.94 B	0.75 U
Silver, Total	7440-22-4	mg/kg	0.9 J	1.1 U	0.57 J	1.3 U	1 JB	1 JB	1.7 U	NA	NA	NA	NA	0.6 U	0.67 U	0.62 U	0.64 U	0.78 U	0.77 U
Zinc, Total	7440-66-6	mg/kg	78.5	16.2	43.3	22.5	55.1 B	59.2 B	33.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium(VI)	18540-29-9	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous Parameters:																			
Cyanide, Free	57-12-5	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide, Total	57-12-5	mg/kg	1 U	0.56 U	0.82 U	0.67 U	0.84 U	0.96 U	0.83 U	0.64 U, 2	0.14 J, 2	0.56 U	0.13 J, 0.68 U	U, 0.19 B	11.4, 4.8	U, 0.14 B	1.3, 4.5	U, 0.74 B	0.0047 U
Fractional Organic Carbon	FOC	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent moisture	MOIST	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	22.8	31.6	26.2	28.3	40.8	40.1
Percent Solids	SOLID	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Solids	Solids	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	TOC	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:
U = Non-detect, value is reporting limit
J = Estimated value below reporting limit
NA = Parameter not analyzed
B = Blank qualified result
--- = Parameter not analyzed

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location	SE/RC-18/1	SE/RC-19/1	SE/RC-19/2	SE/RC-20/1	SE/RC-21/1	SE/RC-21/2	SE/RC-22/1	SE/RC-22/2	SE/RC-22A/1	SE/RC-22A/2	SE/RC-23/1	SE/RC-23/2	SO/RC-23/1	SE/RC-24-1	SE/RC-25-1
		Field ID:	SRC-18/136787	SRC-19/136787	SRC-19/236787	SRC-20/136787	SRC-21/136787	SRC-21/236787	SRC-22/136787	SRC-22/236787	SRC-22A/136787	SRC-22A/236787	SRC-23/1 DEP36787	SRC-23/236787	SRC-23/136787	SRC-24/136787	SRC-25/136787
		Date Sampled:	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000
		Depth (ft):	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0
Volatile Organic Compounds																	
1,1,1,2-Tetrachloroethane	630-20-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	71-55-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	79-00-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	75-34-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	75-35-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloropropylene	563-58-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	87-61-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichloropropane	96-18-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	120-82-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene	95-63-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	96-12-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95-50-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	107-06-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethene	540-59-0	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	78-87-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	108-67-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	541-73-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichloropropane	142-28-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	106-46-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,2-Dichloropropane	594-20-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	95-49-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	591-78-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	106-43-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Isopropyltoluene	99-87-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	108-10-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	67-64-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acrolein	107-02-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	71-43-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromobenzene	108-86-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromochloromethane	74-97-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	75-25-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromomethane	74-83-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	75-15-0	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon tetrachloride	56-23-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	108-90-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroethane	75-00-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	67-66-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloromethane	74-87-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	156-59-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	10061-01-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	124-48-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromomethane	74-95-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorobromomethane	75-27-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	75-71-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	100-41-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylene dibromide	106-93-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	87-68-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	98-82-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl ethyl ketone	78-93-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert butyl ether	1634-04-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	75-09-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Butylbenzene	104-51-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	103-65-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	91-20-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	95-47-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	135-98-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	100-42-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butylbenzene	98-06-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location	SE/RC-18/1	SE/RC-19/1	SE/RC-19/2	SE/RC-20/1	SE/RC-21/1	SE/RC-21/2	SE/RC-22/1	SE/RC-22/2	SE/RC-22A/1	SE/RC-22A/2	SE/RC-23/1	SE/RC-23/2	SO/RC-23/1	SE/RC-24-1	SE/RC-25-1
		Field ID:	SRC-18/136787	SRC-19/136787	SRC-19/236787	SRC-20/136787	SRC-21/136787	SRC-21/236787	SRC-22/136787	SRC-22/236787	SRC-22A/136787	SRC-22A/236787	SRC-23/1 DEP36787	SRC-23/236787	SRC-23/136787	SRC-24/136787	SRC-25/136787
		Date Sampled:	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000
		Depth (ft):	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0
Tetrachloroethene	127-18-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	108-88-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethylene	156-60-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	10061-02-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	79-01-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	75-69-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride	75-01-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylene, Meta + Para	Not Applicable	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Volatile Organic Compounds																	
1,2,4-Trichlorobenzene	120-82-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Benzphenanthracene	218-01-9	ug/kg	190 J	410 J	310 J	63 U	110 J	67 U	77 U	64 U	80 J	68 U	280 J	60 J	61 U	120 J	72 U
1,2-Dichlorobenzene	95-50-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	541-73-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	106-46-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	95-95-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	88-06-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	120-83-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	105-67-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	51-28-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	121-14-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	606-20-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	91-58-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	95-57-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	91-57-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	95-48-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	88-74-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	88-75-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3-Dichlorobenzidine	91-94-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,4-Methylphenol	108-39-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	99-09-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	534-52-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl-phenylether	101-55-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	106-47-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylether	7005-72-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	106-44-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	100-01-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	100-02-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	83-32-9	ug/kg	45 U	45 U	52 U	41 U	46 U	44 U	50 U	42 U	44 U	44 U	120 U	39 U	40 U	54 U	47 U
Acenaphthylene	208-96-8	ug/kg	47 U	48 U	55 U	44 U	48 U	46 U	53 U	44 U	47 U	46 U	120 U	41 U	42 U	57 U	49 U
Anthracene	120-12-7	ug/kg	69 U	130 J	84 J	63 U	70 U	67 U	77 U	64 U	68 U	67 U	180 U	59 U	60 U	83 U	71 U
Benz(a)anthracene	56-55-3	ug/kg	150 J	370 J	260 J	51 U	110 J	53 U	62 U	51 U	63 J	54 U	170 J	47 U	48 U	97 J	57 U
Benzidine	92-87-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	50-32-8	ug/kg	150 J	340 J	260 J	56 U	89 J	59 U	69 U	57 U	75 J	60 U	210 J	53 U	54 U	76 J	66 J
Benzo(b)fluoranthene	205-99-2	ug/kg	120 J	340 J	210 J	45 U	86 J	48 U	55 U	46 U	75 J	48 U	230 J	42 U	43 U	75 J	54 J
Benzo(g,h,i)perylene	191-24-2	ug/kg	110 J	170 J	170 J	51 U	56 U	54 U	62 U	52 U	55 U	55 U	160 J	48 U	49 U	67 U	58 U
Benzo(k)fluoranthene	207-08-9	ug/kg	170 J	270 J	270 J	95 U	110 U	100 U	120 U	97 U	100 U	100 U	270 U	89 U	91 U	120 U	110 U
Benzoic acid	65-85-0	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzyl alcohol	100-51-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	111-91-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	111-44-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroisopropyl)ether	108-60-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	117-81-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	85-68-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	86-74-8	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	218-01-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-N-Butyl phthalate	84-74-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-N-Octyl phthalate	117-84-0	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	53-70-3	ug/kg	67 U	67 U	78 U	62 U	68 U	65 U	75 U	63 U	66 U	66 U	170 U	58 U	59 U	81 U	70 U
Dibenzofuran	132-64-9	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethylphthalate	84-66-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 3
SUMMARY OF SEDIMENT DATA
JCI - FOWLERVILLE

		Location	SE/RC-18/1	SE/RC-19/1	SE/RC-19/2	SE/RC-20/1	SE/RC-21/1	SE/RC-21/2	SE/RC-22/1	SE/RC-22/2	SE/RC-22A/1	SE/RC-22A/2	SE/RC-23/1	SE/RC-23/2	SO/RC-23/1	SE/RC-24-1	SE/RC-25-1
		Field ID:	SRC-18/136787	SRC-19/136787	SRC-19/236787	SRC-20/136787	SRC-21/136787	SRC-21/236787	SRC-22/136787	SRC-22/236787	SRC-22A/136787	SRC-22A/236787	SRC-23/1 DEP36787	SRC-23/236787	SRC-23/136787	SRC-24/136787	SRC-25/136787
		Date Sampled:	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000	9/18/2000
		Depth (ft):	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0
Dimethyl phthalate	131-11-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	206-44-0	ug/kg	430	880	620	68 U	190 J	72 U	93 J	69 U	200 J	72 U	390 J	63 U	65 U	170 J	110 J
Fluorene	86-73-7	ug/kg	53 U	85 J	62 U	49 U	54 U	52 U	60 U	50 U	53 U	52 U	140 U	46 U	47 U	64 U	55 U
Hexachlorobenzene	118-74-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	87-68-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	77-47-4	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	67-72-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	89 J	180 J	150 J	63 U	70 U	67 U	77 U	64 U	68 U	67 U	180 U	59 U	60 U	83 U	71 U
Isophorone	78-59-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitroso-di-N-propylamine	621-64-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	86-30-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	91-20-3	ug/kg	66 U	66 U	77 U	61 U	67 U	64 U	74 U	62 U	65 U	65 U	170 U	57 U	58 U	80 U	68 U
Nitrobenzene	98-95-3	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Chloro-m-cresol	59-50-7	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87-86-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	85-01-8	ug/kg	330 J	660	310 J	50 U	55 U	53 U	61 U	51 U	130 J	53 U	190 J	47 U	48 U	65 U	56 U
Phenol	108-95-2	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PNAs, Total	TPNA	ug/kg	1959	4275	2924	NA	675	NA	203	NA	723	51	1740	NA	NA	568	350
Pyrene	129-00-0	ug/kg	410 J	850	590	45 U	200 J	48 U	110 J	46 U	180 J	51 J	390 J	42 U	43 U	150 J	120 J
Polychlorinated Biphenyls (PCBs):																	
PCB-1248	12672-29-6	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1254	11097-69-1	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1260	11096-82-5	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB, Total	TPCB	ug/kg	NA	25 J	67	NA	9.6 J	5.4 J	NA	NA	138	130	17 J	NA	NA	NA	NA
PCB-1016	12674-11-2	ug/kg	14 U	14 U	17 U	13 U	14 U	14 U	16 U	13 U	14 U	14 U	37 U	12 U	13 U	17 U	15 U
PCB-1221	11104-28-2	ug/kg	11 U	11 U	13 U	9.9 U	11 U	10 U	12 U	10 U	11 U	11 U	28 U	9.3 U	9.5 U	13 U	11 U
PCB-1232	11141-16-5	ug/kg	4.4 U	4.4 U	5.1 U	4.1 U	4.5 U	4.3 U	4.9 U	4.1 U	4.4 U	4.3 U	11 U	3.8 U	3.9 U	5.3 U	4.6 U
PCB-1242	53469-21-9	ug/kg	4.3 U	4.3 U	5 U	3.9 U	4.3 U	4.2 U	4.8 U	4 U	4.2 U	4.2 U	11 U	3.7 U	3.8 U	5.2 U	4.4 U
PCB-1248	12672-29-6	ug/kg	5.4 U	25 J	67	5 U	9.6 J	5.4 J	6.1 U	5.1 U	45	130	17 J	4.7 U	4.8 U	6.6 U	5.7 U
PCB-1254	11097-69-1	ug/kg	6 U	6 U	7 U	5.5 U	6.1 U	5.8 U	6.7 U	5.6 U	5.9 U	5.8 U	15 U	5.1 U	5.2 U	7.2 U	6.2 U
PCB-1260	11096-82-5	ug/kg	23 U	23 U	27 U	21 U	24 U	23 U	26 U	22 U	93	23 U	60 U	20 U	21 U	28 U	24 U
Total Metals:																	
Aluminum, Total	7429-90-5	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic, Total	7440-38-2	mg/kg	5.2	3.6	13.2	5.3	3.6	2.5	5.4	5.2	2.3	5	24.9	6.7	3.5	11.1	4.8
Barium, Total	7440-39-3	mg/kg	28.8	24.1	43.9	47.5	21.6	22.1	21.4	12.6	15	24	200	15	7.9	58.7	38.4
Cadmium, Total	7440-43-9	mg/kg	0.13 U	0.13 U	0.15 U	0.12 U	0.13 U	0.13 U	0.15 U	0.12 U	0.13 U	0.13 U	0.34 U	0.11 U	0.11 U	0.52 B	0.26 B
Chromium, Total	7440-47-3	mg/kg	15.3	11.3	45.8	13.3	12	5.9	8.9	8.6	5.2	29.9	29.2	8.1	4.5	6.7	5.6
Copper, Total	7440-50-8	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead, Total	7439-92-1	mg/kg	6.9	5.2	11.1	7.8	3.1	3	3.5	2.3	2.6	4.9	17.1	3.3	2.5	8.7	11
Mercury, Total	7439-97-6	mg/kg	0.021 B	0.014 B	0.034 B	0.0085 B	0.011 B	0.015 B	0.027 B	0.011 B	0.02 B	0.022 B	0.071 B	0.0041 U	0.0052 B	0.038 B	0.032 B
Nickel, Total	7440-02-0	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium, Total	7782-49-2	mg/kg	0.58 U	0.59 U	0.68 U	0.54 U	0.59 U	0.57 U	0.65 U	0.55 U	0.58 U	0.57 U	1.5 U	0.5 U	0.51 U	0.92 B	0.61 U
Silver, Total	7440-22-4	mg/kg	0.6 U	0.6 U	0.7 U	0.55 U	0.61 U	0.58 U	0.67 U	0.56 U	0.59 U	0.58 U	1.5 U	0.51 U	0.52 U	0.72 U	0.62 U
Zinc, Total	7440-66-6	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium(VI)	18540-29-9	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous Parameters:																	
Cyanide, Free	57-12-5	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide, Total	57-12-5	mg/kg	U, 0.17 B	U, 0.17 B	U, 0.7 B	U, 0.0033 U	U, 0.0037 U	0.0035 U	U, 0.15 B	U, 0.0034 U	0.32 B, 5.6	1.4, 13.7	U, 0.88 B	U, 0.23 B	U, 0.22 B	0.87, 1	U, 0.0038 U
Fractional Organic Carbon	FOC	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent moisture	MOIST	%	22.8	23.2	33.8	16.2	24.1	20.6	31.1	17.5	21.9	21.4	70.2	10.4	12.3	36.1	25.8
Percent Solids	SOLID	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Solids	Solids	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	TOC	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:
U = Non-detect, value is reporting limit
J = Estimated value below reporting limit
NA = Parameter not analyzed
B = Blank qualified result
--- = Parameter not analyzed

Table 4
Surface Weighted Average Concentrations
Former Stanley Tool Facility
Fowlerville, MI

Volatile Organic Compounds:	Units	SWAC Value	Probable Effects Concentration (PEC):	Threshold Effects Concentration (TEC):	Background:
1,1-Dichloroethane	µg/kg	37.2	NL	NL	5.8
1,2,4-Trimethylbenzene	µg/kg	31.1	NL	NL	24
1,2-Dichloroethene	µg/kg	---	NL	NL	81
Acetone	µg/kg	387.7	NL	NL	761
cis-1,2-Dichloroethene	µg/kg	84.2	NL	NL	81
Methyl ethyl ketone	µg/kg	407.7	NL	NL	517
Naphthalene	µg/kg	175.3	561	176	78.7
sec-Butylbenzene	µg/kg	35.8	NL	NL	27
Toluene	µg/kg	24.3	NL	NL	3.2
Trichloroethene	µg/kg	40.9	NL	NL	11
Semivolatile Organic Compounds:					
Anthracene	µg/kg	137.4	845	57.2	NL
Benz(a)anthracene	µg/kg	133.9	1,050	108	303
Benzo(a)pyrene	µg/kg	119.6	1,450	150	332
Benzo(b)fluoranthene	µg/kg	129.3	NL	NL	307
Benzo(g,h,i)perylene	µg/kg	116.2	NL	NL	160
Benzo(k)fluoranthene	µg/kg	112.5	NL	NL	270
bis(2-Ethylhexyl)phthalate	µg/kg	98.5	NL	NL	110
Chrysene	µg/kg	121.7	1,290	166	350
Di-N-Butyl phthalate	µg/kg	144.6	NL	NL	220
Dibenz(a,h)anthracene	µg/kg	151.1	NL	33	NL
Fluoranthene	µg/kg	196.4	2,230	423	631
Fluorene	µg/kg	151.1	536	77.4	NL
Indeno(1,2,3-cd)pyrene	µg/kg	121.8	NL	NL	160
Phenanthrene	µg/kg	124.5	1,170	204	240
Pyrene	µg/kg	173.0	1,520	195	518
Polychlorinated Biphenyl (PCBs):					
PCB, Total	µg/kg	152.6	676	59.8	NL
Metals:					
Arsenic, Total	mg/kg	14.3	33	9.79	36.6
Barium, Total	mg/kg	45.0	NL	NL	163
Cadmium, Total	mg/kg	0.3	4.98	0.99	1.85
Chromium, Total	mg/kg	53.1	111	43.4	15.4
Chromium(VI)	mg/kg	3.6	NL	NL	NL
Copper, Total	mg/kg	42.5	149	31.6	25.9
Lead, Total	mg/kg	11.9	128	35.8	21.6
Mercury, Total	mg/kg	0.1	1.06	0.18	0.147
Nickel, Total	mg/kg	21.7	48.6	22.7	15.5
Selenium, Total	mg/kg	0.3	NL	NL	2.32
Silver, Total	mg/kg	0.1	NL	NL	1
Zinc, Total	mg/kg	88.9	459	121	110

NL - A standard values was not listed for this compound.

--- Complete analytical data set not available for this compound..

µg/kg - microgram of compound per kilogram of sediment.

mg/kg - milligram of compound per kilogram of sediment.

criteria is exceeded by SWAC

Table 4
Surface Weighted Average Concentrations
Former Stanley Tool Facility
Fowlerville, MI

Volatile Organic Compounds:	Units	SWAC Value	Probable Effects Concentration (PEC):	Threshold Effects Concentration (TEC):	Background:
1,1-Dichloroethane	µg/kg	37.2	NL	NL	5.8
1,2,4-Trimethylbenzene	µg/kg	31.1	NL	NL	24
1,2-Dichloroethene	µg/kg	---	NL	NL	81
Acetone	µg/kg	387.7	NL	NL	761
cis-1,2-Dichloroethene	µg/kg	84.2	NL	NL	81
Methyl ethyl ketone	µg/kg	407.7	NL	NL	517
Naphthalene	µg/kg	175.3	561	176	78.7
sec-Butylbenzene	µg/kg	35.8	NL	NL	27
Toluene	µg/kg	24.3	NL	NL	3.2
Trichloroethene	µg/kg	40.9	NL	NL	11
Semivolatile Organic Compounds:					
Anthracene	µg/kg	137.4	845	57.2	NL
Benz(a)anthracene	µg/kg	133.9	1,050	108	303
Benzo(a)pyrene	µg/kg	119.6	1,450	150	332
Benzo(b)fluoranthene	µg/kg	129.3	NL	NL	307
Benzo(g,h,i)perylene	µg/kg	116.2	NL	NL	160
Benzo(k)fluoranthene	µg/kg	112.5	NL	NL	270
bis(2-Ethylhexyl)phthalate	µg/kg	98.5	NL	NL	110
Chrysene	µg/kg	121.7	1,290	166	350
Di-N-Butyl phthalate	µg/kg	144.6	NL	NL	220
Dibenz(a,h)anthracene	µg/kg	151.1	NL	33	NL
Fluoranthene	µg/kg	196.4	2,230	423	631
Fluorene	µg/kg	151.1	536	77.4	NL
Indeno(1,2,3-cd)pyrene	µg/kg	121.8	NL	NL	160
Phenanthrene	µg/kg	124.5	1,170	204	240
Pyrene	µg/kg	173.0	1,520	195	518
Polychlorinated Biphenyl (PCBs):					
PCB, Total	µg/kg	152.6	676	59.8	NL
Metals:					
Arsenic, Total	mg/kg	14.3	33	9.79	36.6
Barium, Total	mg/kg	45.0	NL	NL	163
Cadmium, Total	mg/kg	0.3	4.98	0.99	1.85
Chromium, Total	mg/kg	53.1	111	43.4	15.4
Chromium(VI)	mg/kg	3.6	NL	NL	NL
Copper, Total	mg/kg	42.5	149	31.6	25.9
Lead, Total	mg/kg	11.9	128	35.8	21.6
Mercury, Total	mg/kg	0.1	1.06	0.18	0.147
Nickel, Total	mg/kg	21.7	48.6	22.7	15.5
Selenium, Total	mg/kg	0.3	NL	NL	2.32
Silver, Total	mg/kg	0.1	NL	NL	1
Zinc, Total	mg/kg	88.9	459	121	110

NL - A standard values was not listed for this compound.

--- Complete analytical data set not available for this compound..

µg/kg - microgram of compound per kilogram of sediment.

mg/kg - milligram of compound per kilogram of sediment.

criteria is exceeded by SWAC

Photo #1: Approximately 100 feet north of the South Ditch, looking north.

Photo #2: Approximately 25 feet north of the South Ditch, looking east.

Photo #3: Approximately 80 feet north of the South Ditch, looking upstream.

Photo #4: Approximately 450 feet from the North Ditch, looking upstream.

Photo #5: Approximately 375 feet south of North Ditch, looking upstream.

Photo #6: North Ditch entering Red Cedar River.

Photo #7: Approximately 25 feet north of North Ditch, facing downstream.

SEDIMENT TECHNICAL MEMORANDUM - APPENDIX B

BACKGROUND CRITERIA

JCI F ville

Summary of Facility- Specific Background Limits for Sediments

Parameter	n	Distribution	Rationale	Outlier evaluation	Min (mg/Kg)	Max (mg/Kg)	Mean (mg/Kg)	Standard Deviation	Background UTL (mean + 3 std dev) (mg/Kg)	Background UTL (highest value in data set) (mg/Kg)
Metals										
Aluminum, Total	6	Nornal	Passed tests for normality and for lognormality	None detected	180	3710	2072	1247	**5810**	NA
Arsenic, Total	19	Lognormal	Failed tests for normality. Passed tests for lognormality	None detected	1.2	35.8	10.7	8.63	**36.6**	NA
Barium, Total	19	Lognormal	Failed tests for normality. Passed tests for lognormality	None detected	6.6	178	47.3	38.6	**163**	NA
Cadmium, Total	19	Lognormal	Failed tests for normality. Passed tests for lognormality	None detected	0.16	2	0.49	0.45	**1.85**	NA
Chromium, Total	19	Lognormal	Failed tests for normality. Passed tests for lognormality	None detected	3.6	14	6.88	2.83	**15.4**	NA
Chromium, VI	10	Cannot be determined	All non-detect	NA	NA	NA	NA	NA	NA	NA
Copper, Total	16	Lognormal	Failed tests for normality. Passed tests for lognormality	None detected	2.7	21.7	8.77	5.72	**25.9**	NA
Cyanide, Total	19	Cannot be determined	>50% non-detect	NA	0.02	0.87	0.24	0.22	NA	**0.87**
Lead, Total	19	Lognormal	Passed tests for normality and for lognormality	None detected	1.7	17	8.11	4.49	**21.6**	NA
Mercury, Total	19	Normal	Passed tests for normality. Failed tests for lognormality	None detected	0.015	0.12	0.058	0.03	**0.147**	NA
Nickel, Total	16	Lognormal	Failed tests for normality. Passed tests for lognormality	None detected	4.3	15	7.73	2.58	**15.5**	NA
Selenium, Total	19	Lognormal	Failed tests for normality. Passed tests for lognormality	None detected	0.12	2.4	0.65	0.55	**2.32**	NA
Silver, Total	16	Cannot be determined	Failed tests for normality and for lognormality	NA	0.02	1	0.32	0.39	NA	**1**
Zinc, Total	16	Lognormal	Failed tests for normality. Passed tests for lognormality	None detected	12	96	36.1	24.7	**110**	NA

JCI [illegible]ville
Summary of Facility- Specific Background Limits for Sediments

Parameter	n	Distribution	Rationale	Outlier evaluation	Min (mg/Kg)	Max (mg/Kg)	Mean (mg/Kg)	Standard Deviation	Background UTL (mean + 3 std dev) (mg/Kg)	Background UTL (highest value in data set) (mg/Kg)
Semivolatiles										
Benzo(a)anthracene	7	Lognormal	Passed tests for normality and for lognormality	None detected	30	230	103	66.6	**303**	NA
Benzo(a)pyrene	10	Lognormal	Failed tests for normality. Passed tests for lognormality	None detected	37	110	110.4	73.85	**332**	NA
Benzo(b)fluoranthene	9	Lognormal	Failed tests for normality. Passed tests for lognormality	None detected	54	260	114.2	64.3	**307**	NA
Benzo(g.h.I)perylene	19	Cannot be determined	>50% nondetect	NA	35	160	NA	NA	NA	**160**
Benzo(k)fluoranthene	19	Cannot be determined	>50% nondetect	NA	69	270	NA	NA	NA	**270**
Benzoic Acid	10	Cannot be determined	>50% nondetect	NA	150	320	NA	NA	NA	**320**
Bis-(2-ethylhexyl)phthala	15	Cannot be determined	Failed tests for normality and for lognormality	NA	25	110	NA	NA	NA	**110**
Chrysene	19	Cannot be determined	>50% nondetect	NA	42	350	NA	NA	NA	**350**
Dimethylphthalate	19	Cannot be determined	>50% nondetect	NA	38	38	NA	NA	NA	**38**
Di-n-butylphthalate	19	Cannot be determined	>50% nondetect	NA	35	220	NA	NA	NA	**220**
Fluoranthene	12	Normal	Passed tests for normality. Failed tests for lognormality	None detected	22	560	182	149	**631**	NA
Ideno(1,2,3-cd)pyrene	19	Cannot be determined	>50% nondetect	NA	32	160	NA	NA	NA	**160**
Naphthalene	7	Lognormal	Failed tests for normality. Passed tests for lognormality	One outlier detected (63 ug/Kg)	8	63	19.86	19.63	**78.7**	NA
Phenanthrene	10	Cannot be determined	>50% nondetect	NA	40	240	NA	NA	NA	**240**
Pyrene	11	Normal	Passed tests for normality. Failed tests for lognormality	None detected	27	430	120	117	**518**	NA
Volatiles										
1,1-Dichloroethane	16	Cannot be determined	>50% nondetect	NA	5.8	5.8	NA	NA	NA	**5.8**
1,2-Dichloroethene	6	Cannot be determined	>50% nondetect	NA	30	81	NA	NA	NA	**81**
1,2,3-Trichlorobenzene	10	Cannot be determined	>50% nondetect	NA	41	41	NA	NA	NA	**41**

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Summary of Facility- Specific Background Limits for Sediments

Parameter	n	Distribution	Rationale	Outlier evaluation	Min (mg/Kg)	Max (mg/Kg)	Mean (mg/Kg)	Standard Deviation	Background UTL (mean + 3 std dev) (mg/Kg)	Background UTL (highest value in data set) (mg/Kg)
1,2,4-Trichlorobenzene	10	Cannot be determined	>50% nondetect	NA	13	41	NA	NA	NA	**41**
1,2,4-Trimethylbenzene	10	Cannot be determined	>50% nondetect	NA	11	24	NA	NA	NA	**24**
4-Isopropyltoluene	10	Cannot be determined	>50% nondetect	NA	23	23	NA	NA	NA	**23**
Acrolein	6	Cannot be determined	>50% nondetect	NA	5.2	5.2	NA	NA	NA	**5.2**
Acetone	10	Lognormal	Failed tests for normality. Passed tests for lognormality	None detected	290	690	413	116	**761**	NA
Chloroform	19	Cannot be determined	>50% nondetect	NA	11	22	NA	NA	NA	**22**
Chloromethane	10	Lognormal	Failed tests for normality. Passed tests for lognormality	None detected	15	44	23	9	**49.5**	NA
Hexachlorobutadiene	10	Cannot be determined	>50% nondetect	NA	27	16	NA	NA	NA	**160**
Methyl Ethyl Ketone	10	Lognormal	Failed tests for normality. Passed tests for lognormality	None detected	86	220	186	110	**517**	NA
n-Butylbenzene	10	Cannot be determined	>50% nondetect	NA	45	45	NA	NA	NA	**45**
sec-Butylbenzene	10	Cannot be determined	>50% nondetect	NA	27	27	NA	NA	NA	**27**
Styrene	10	Cannot be determined	>50% nondetect	NA	13	13	NA	NA	NA	**13**
Toluene	16	Cannot be determined	>50% nondetect	NA	2.5	3	NA	NA	NA	**3.2**
Trichloroethene	16	Cannot be determined	>50% nondetect	NA	9.4	11	NA	NA	NA	**11**

SEDIMENT TECHNICAL MEMORANDUM - APPENDIX C

DIRECT CONTACT AND INGESTION CLEANUP CRITERIA

Appendix C

Sediment Direct Contact and Incidental Ingestion Criteria

Site-specific direct contact cleanup criteria for sediments were calculated using the general equations presented by MDEQ in Part 201 Rule R299.5720. Equations for criteria for carcinogens and non-carcinogens are shown below.

CLEANUP CRITERIA EQUATION FOR CARCINOGENS:

$$DCC_c = \frac{TR \times AT \times CF \times RSC}{SF \times [(EF_i \times IF \times AE_i)+(EF_d \times DF \times AE_d)]}$$

where,

DCC_c	(Direct contact criterion for carcinogen)	=	chemical-specific, ug/kg or ppb
TR	(Target risk level)	=	10^{-5}
AT	(Averaging time)	=	25,550 days (70 years x 365 days/year)
CF	(Conversion factor)	=	1E+9 ug/kg
RSC	(Relative source contribution)	=	1
SF	(Oral cancer slope factor)	=	chemical-specific $(mg/kg\text{-}day)^{-1}$
EF_i	(Ingestion exposure frequency)	=	52 days/year
IF	(Age-adjusted soil ingestion factor)	=	74 mg-year/kg-day
AE_i	(Ingestion absorption efficiency)	=	chemical-specific or default specified in R299.5720(3)
EF_d	(Dermal exposure frequency)	=	52 days/year
DF	(Age-adjusted soil dermal factor)	=	310 mg/year/kg-day
AE_d	(Dermal absorption efficiency)	=	chemical-specific or default specified in R299.5720(3)

CLEANUP CRITERIA EQUATION FOR NONCARCINOGENS:

$$DCC_{nc} = \frac{THQ \times RfD \times AT \times CF \times RSC}{[(EF_i \times IF \times AE_i) + (EF_d \times DF \times AE_d)]}$$

where,

DCC_{nc}	(Direct contact criterion)	=	chemical-specific, ug/kg or ppb
THQ	(Target hazard quotient)	=	1
RfD	(Oral reference dose)	=	chemical-specific (mg/kg-day)
AT	(Averaging time)	=	10,950 days (30 years x 365 days/year)
CF	(Conversion factor)	=	1E+9 ug/kg
RSC	(Relative source contribution)	=	1
EF_i	(Ingestion exposure frequency)	=	52 days/year
IF	(Age-adjusted soil ingestion factor)		= 74 mg-year/kg-day
AE_i	(Ingestion absorption efficiency)	=	chemical-specific or default specified in R299.5720(3)
EF_d	(Dermal exposure frequency)	=	52 days/year
DF	(Age-adjusted soil dermal factor)	=	310 mg/year/kg-day
AE_d	(Dermal absorption efficiency)	=	chemical-specific or default specified in R299.5720(3)

Values of selected parameters were modified to estimate reasonable and expected exposures to sediments based on consultation with MDEQ (Dennis Bush, MDEQ, personal communication with Glenn Hendrix, Earth Tech, June 9, 2003). The modifications used reflect those recommended by MDEQ for other sediment exposure scenarios in the State. The specific changes are:

- The age-adjusted soil ingestion factor (IF) was changed to 74 mg-year/kg-day to represent exposure of children (2 to 18 years of age) to sediment.

- The ingestion exposure frequency (EF_i) was changed to 52 days/year from the default value of 350 days/year. This represents potential exposure four times per week during the warmer summer months (June through August) and twice per month during the cooler months of May and September.

- The age-adjusted soil dermal factor (DF) was changed to 310 mg-year/kg-day from 353 mg-year/kg-day for soil. This change is considered representative of potentially exposed children (2 to 18 years of age) instead of adults.

- All other exposure and chemical-specific parameters were retained and used as by the MDEQ for potential soil exposures (Rule 299.5720).

SEDIMENT TECHNICAL MEMORANDUM - APPENDIX D

SEDIMENT CRITERION BASED ON BIOACCUMULATION OF PCB

Appendix D

Bioaccumulation of Chemicals from Sediment

This appendix develops and presents sediment criteria for the Red Cedar River based on bioaccumulation of PCBs by carp and ingestion of carp by human receptors.

Bioaccumulation is the accumulation of contaminants in the tissue of organisms through any route, including respiration, ingestion, or direct contact with contaminated water, sediment, pore water, or dredged material (EPA 2002. *Bioaccumulation Testing and Interpretation for The Purpose of Sediment Quality Assessment: Status and Needs.* EPA-823-R-00-001. February 2000). EPA and other agency programs have identified different bioaccumulative chemicals for different purposes. EPA's Bioaccumulation Analysis Workgroup (EPA 2000) has developed a list of potential bioaccumulative chemicals of potential concern. Of these potential bioaccumulative compounds, 24 have been detected in Red Cedar River sediments at concentrations above background (Table 1).

In contrast to the other chemicals measured in Red Cedar River sediment, PCBs show a great potential to biomagnify in aquatic ecosystems, and equilibrium partitioning methodology can be used to estimate a chemical-specific biota-sediment accumulation factors (BSAF) for setting tissue residue-linked sediment chemical levels for the protection of human health. Mercury, primarily as methylmercury, has the potential to biomagnify in the aquatic environment, though there is a paucity of information on the most appropriate methods for developing chemical-specific BSAFs. In addition, total mercury was detected in only 5 out of 75 discrete sediment samples slightly above background concentrations, though the average detected concentration (0.061 mg/kg) is below background (0.147 mg/kg). Benzo(a)pyrene is a polycyclic aromatic hydrocarbon (PAH). In general, PAHs are rapidly metabolized and considered unlikely to biomagnify despite their high lipid solubility (Eisler, R., 1987. Polycyclic Aromatic Hydrocarbons Hazards to Fish, Wildlife and Invertebrates: A Synoptic Review. USFSW Biological Report 85(1.14). Contaminant Hazards Reviews. Report 14, April). PAHs are more of concern in marine and estuarine environments than in freshwater systems, where bioaccumulation in shellfish and bivalves has been observed. Thus, this evaluation of the potential for adverse human exposure to sediments through consumption of contaminated fish focuses solely on PCBs.

Development of Human-Health Based Sediment Quality Criteria

The development of tissue residue-linked sediment chemical levels for the protection of human health requires consideration of several important parameters. These include identification of the target human population to be protected, the species and portions of the fish that are consumed, and the rate of fish consumption (EPA 2000). The process for developing human health based sediment quality criteria generally followed methods presented by U.S. EPA Region 5 (Pelka, A. 1996. *Bioaccumulation Models and Applications: Setting Sediment Cleanup Goals in the Great Lakes.* National Sediment Bioaccumulation Conference). First, a target level in fish (Cfish) is calculated using basic exposure and risk equations (from Pelka 1996):

Carcinogenic Endpoint:

$$Cfish_c = (TR \times BW \times AT) / (IR \times FI \times ABS \times EF \times ED \times SF)$$

Noncarcinogenic Endpoint:

$$Cfish_{nc} = (THQ \times BW \times AT \times RfD) / (IR \times FI \times ABS \times EF \times ED)$$

Daily fish ingestion rates are average values for recreational anglers presented in the *Exposure Factors Handbook* (EPA/600/P-95-002Fa). Based on a Michigan study, adult intake is 17 g/day (Table 10-84 in EPA 1997) and the mean intake of recreational fish by a 1- to 5-year-old age group is 5.63 g/day (Table 10-61 in EPA 1997). Dietary intakes were adjusted by a factor of 0.24 to account for the consumption of trophic level 3 fish based on dietary percentages used in the Final Water Quality Guidance for the Great Lakes System (40 CFR Part 9,122,123, 31, 132; 23 March 1995). The fraction of fish ingested from the contaminated area (0.1) is based on the typical fraction of fish estimated to be ingested from the Saginaw River (*Crane, J. L. 1992. Abstract and Table of Contents to "Baseline Human Health Risk Assessment: Saginaw River, Michigan, Area of Concern," EPA-905-R92-008. Athens, Ga.: Environmental Research Laboratory.* http://www.epa.gov/glnpo/acrs/EPA-905-R92-008). This trophic level and fraction ingested is appropriate for Red Cedar River because the primary game fish are carp and catfish and because game-sized fish do not inhabit this portion of the Red Cedar River year round. Game-sized fish of any species were not caught in an extensive electroshocking survey of the river near the site during October 2003. The fisheries biologist professional judgment was that larger fish will not remain in a relatively small stream during colder months and that larger fish, including carp, would return in the spring. Toxicity data for noncancer and cancer effects of PCBs on humans were obtained from the U.S. EPA's Integrated Risk Information System (accessed October 2003).

Toxicity is determined by the exposure of an animal to bioavailable contaminants and the animal's sensitivity to the contaminant. These processes have been shown to be a function of the organism's lipid content, size, growth rate, gender, diet, and ability to metabolize or transform a given contaminant, as well as the chemical conditions of the surrounding medium (EPA 2000). Biota-sediment accumulation factors (BSAFs) are defined as the ratio of a substance's lipid-normalized concentration in tissue of an aquatic organism to its organic carbon-normalized concentration in surface sediment, in situations where the ratio does not change substantially over time, both the organism and its food are exposed, and the surface sediment is representative of average surface sediment in the vicinity of the organism (EPA 2000). To calculate an acceptable human health based sediment concentration, the target fish level is then input into a BSAF equation:

$$Cs = Cf \times TOC / (BSAF \times Lipids)$$

The biota-sediment accumulation factor (BSAF) for PCBs is a value for carp collected from the Saginaw River in Michigan (Pelka, A. 1996. *Bioaccumulation Models and Applications: Setting Sediment Cleanup Goals in the Great Lakes.* National Sediment Bioaccumulation Conference). A fraction lipid of 0.0182 was used, which is the standardized fraction lipid value for trophic level 3 fish used to derive human health criteria and values for the Great Lakes Initiative (EPA 1995). The total organic carbon content (TOC) is the average of TOC values (3.7%) for sediment samples collected in May 2003. The calculation of human health based sediment quality criteria using the above equations is provided in Table 2. The proposed sediment quality criteria is 7.68 mg/kg. Total PCB concentrations exceeded this criteria at two out of 75 sample locations (RC-3/12 and E1 (0 to 12 inches). The 95 UCL PCB concentration (0.38 mg.kg) does not exceed this criteria.

SEDIMENT TECHNICAL MEMORANDUM - APPENDIX E

95% UCL CALCULATIONS FOR PCBs

Appendix E
Average Concentration of PCB in Sediment: Summary Statistics

Number Samples	128
Detects	66
Minimum	5.20
Maximum	1.100E+04
Mean	419
Median	165
Normal Standard Deviation	1.479E+03
Coefficient of Variation	2.186E+06
Skewness	3.53
Variance	5.59
Lognormal Standard Deviation	1.42
Non-Parametric, CLT 95% UCL	634
Non-Parametric, Jackknife 95% UCL	636
Non-Parametric, Standard Bootstrap 95% UCL	633
Non-Parametric, Bootstrap-t 95% UCL	803
Non-Parametric, Chebyshev (Mean Standard) 95% UCL	989
Lognormal, H-Statistic 95% UCL	380
Lognormal, Chebyshev (MVUE) 95% UCL	472
Non-Parametric, Chebyshev (Mean Standard) 97.5% UCL	1,235
Comments	MDEQ recommends the lognormal H-Statistic.

NOTES:

1: All units are in micrograms of chemical per kilogram of sediment (µg/kg).
2: Background sampling locations were not included in calculation.

D

Appendix D
Interim Measures Report

(Appendix D is presented under separate cover)

E

APPENDIX E
GROUNDWATER MONITORING PLAN

GROUNDWATER MONITORING PROGRAM PLAN FORMER STANLEY TOOLS SITE FOWLERVILLE, MICHIGAN

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February 2004

TABLE OF CONTENTS

1. INTRODUCTION

This document presents the Groundwater Monitoring Program (GMP) Plan for the Former Stanley Tools (FST) Site located at 425 Frank St., in Fowlerville, Michigan. The facility is currently owned by Johnson Controls, Inc. (JCI), who contracted Earth Tech, Inc. and Weston Solutions, Inc. (ETW) to provide professional services related to the ongoing Resource Conservation and Recovery Act (RCRA) corrective action program at the site.

Pursuant to 40 CFR 265.93(d)(7) and Michigan Act 451, Part 201, the GMP should be capable of assessing the site's impact on the quality of groundwater in the uppermost aquifer. The overall objective of the GMP will be to assess the concentration and migration rate of hazardous constituents in the groundwater on a regular basis until final closure of the site.

2. MONITORING WELL NETWORK

Currently there are a total of 57 monitoring wells located on- and off-site that have been used throughout the completion of the RCRA Facility Investigation (RFI) and the more recent project efforts conducted as part of the December 2002 Administrative Order on Consent (AOC). That AOC was a performance-based order that emphasized the demonstration of environmental indicator controls and the development of long-term corrective measures. JCI accomplished applicable objectives of the AOC through the implementation of Interim Measures (IMs), the submittal of two Environmental Indicator Reports (CA 725 and CA 750), and a Final Corrective Measures Proposal (CMP) in February 2004.

This GMP Plan has been developed as part of the corrective action and monitoring program for the FST site to accomplish the following specific objectives:

- The primary objective is to assess the site's impact on the quality of groundwater pursuant to 40 CFR 265.93(d)(7) and Part 201.
- The short-term objective of the monitoring program will be to establish a new baseline of groundwater flow and contaminant conditions following the 2003 IM excavation, which removed overlying contaminant sources and disturbed the steady state aquifer conditions.
- The long-term objective of the monitoring program will be to assess the concentration and migration rate of hazardous constituents in the groundwater on a regular basis until final closure of the site.

Per 40 CFR 265.91, the groundwater monitoring system will be capable of yielding groundwater samples for analysis and will consist of at least one monitoring well installed hydraulically upgradient from the Solid Waste Management Units (SWMUs), and at least three monitoring wells installed hydraulically downgradient at the limits of the SWMUs.

Due to the documented presence of impacted groundwater at the FST site, several additional monitoring wells are included in the overall monitoring system. Some of these wells will monitor long-term contaminant attentuation effects (i.e. performance wells).

Due to the additional groundwater monitoring demonstrations required as part of the MDEQ Mixing Zone Determination, several additional monitoring well nests are included in the overall monitoring system (i.e. mixing zone compliance wells). The wells selected for regular monitoring may be changed based on the approval of the determination request.

As more fully described in this GMP Plan, selected monitoring well samples will be analyzed for VOCs, Michigan 10 metals plus nickel and hexavalent chromium, and cyanide. In addition, MNA parameters will also be analyzed as part of the short- and long-term GMP and corrective action objectives.

ETW evaluated the location and screen depth setting of each of the existing monitoring wells in relation to all SWMUs, potential receptors, property boundaries, the Red Cedar River, and the documented groundwater quality conditions across the study area. Based on that evaluation, a focused monitoring well network comprised of 17 GMP wells has been identified to best accomplish the stated objectives of the GMP. **Table 2-1** presents a detailed description of each selected GMP well, including the well location, purpose, sampling frequency, and analytical parameters. Some of the GMP monitoring wells are also designated as Points of Compliance, as required by the AOC and described in the February 2004 FCMP.

Of these 17 GMP monitoring wells, two wells are located upgradient and 15 wells are located adjacent to, sidegradient, or downgradient of the regulated units/SWMUs. Many of the sidegradient/downgradient wells are incorporated into the GMP due to the pending MDEQ Mixing Zone Determination. Eleven of the listed wells will be sampled on a semi-annual basis. Four of the five deep wells, and two wells located within the center of the VOC plume, will be sampled annually. A monitoring well location map is presented as **Figure 2-1**. **Table 2-2** summarizes the monitoring well construction details and recent water level elevation data for all wells at the FST site.

3. FIELD SAMPLING PROTOCOLS

3.1 WELL MAINTENANCE PROGRAM

The following sections describe the well maintenance program that applies to all monitoring wells on- and off-site. All wells/protective casings were labeled in 2003 to increase well designation visibility and all wells were provided new, keyed-alike locks.

3.1.1 Well Inspection

The routine inspection of the monitoring system is important to ensure that the wells are in good condition and that no damage or other problems have occurred that might affect the monitoring program.

During each sampling event, all monitoring wells will be inspected for damage and/or security of the well covers. The inspection will include an assessment of cracking or splitting of the well apron, physical damage to the well cover, documentation of any evidence indicative of well tampering, operation of the locks on the wells, and all other tasks described in the Monitoring Well Inspection Checklist shown in **Table 3-1**. The inspection will also include recording the depth to the bottom of the well (to check for sedimentation inside the well) and the purge rate used for low flow sampling. This checklist will be completed for each well during each sampling event. In the event any well conditions are identified that require repair, the repair(s) will be completed as soon as practical. Copies of the checklists will be kept in the project file for the duration of the GMP.

3.1.2 Corrective Action

Table 3-2 lists the corrective actions to be performed if damage or other adverse conditions are observed at a monitoring well during a well inspection. When feasible, all corrective measures will be completed prior to the next sampling event.

3.2 WATER LEVEL MEASUREMENTS

Prior to the sampling of all monitoring wells, water level measurements will be collected. Measurements will be made from all monitoring wells at the FST site, including those not part of the GMP, in order to best characterize site-wide groundwater flow conditions (**Table 2-1**). All readings will be collected within twenty-four hours of each other in order to obtain accurate information on aquifer conditions. The following protocols will be used during water level measurements:

- The water level probe and cable will be decontaminated prior to each use as indicated in Section 5.
- Wells caps/covers will be opened for a minimum of 15 minutes before water elevations are taken to allow water levels to equilibrate.
- Depth to water will be measured with an electrical sounding device (accuracy $\pm$0.01 feet). The reference point for this measurement will be the north side of the inner casing.
- The depth to water and the time will be recorded in the field notebook.

3.3 GROUNDWATER PURGING AND SAMPLING

Groundwater samples will be collected from the 17 GMP monitoring wells using low-flow sampling procedures. Sampling equipment will be decontaminated pursuant to protocols presented in Section 5. Each well will be purged and sampled using the following methodology:

- Note the existing condition of the well and wellhead. If the well designation is not visible on the outside of the riser or protective casing, add the designation as appropriate.
- Monitor the headspace of the well per the Health and Safety Plan as the well cap is removed.
- Measure the depth to water from the north edge of the inner casing.
- Slowly lower an appropriate length of clean tubing used with the peristaltic pump to the approximate mid-point of the screened interval.
- Immediately prior to purging, the depth to water will be measured and recorded. Start purging the well at a flow rate that maintains drawdown to 3 inches or less. Water-level measurements will be made continuously to document the stabilization. Every attempt will be made to have a maximum drawdown of 3 inches. If the recharge rate of the well is less than the minimum pumping rate, every attempt will be made so that drawdown does not proceed to the level below the intake of the tubing. All field issues will be documented, in detail, in the field logbook.

- Measure the pH, specific conductance, Eh, temperature, and D.O. of the purge water from an in-line flow-through cell(s) every 5 minutes. There should be no air bubbles observed in the tubing.

- Continue purging until stabilization is achieved. Stabilization is defined as three consecutive readings that are within the following criteria:

  - pH: ±0.1 unit
  - Specific conductivity: ±3%
  - Temperature: ±3 degrees C
  - Eh: ±10 mV
  - D.O.: ±10%
  - Turbidity: ±10 NTU

- Continue pumping once purging is completed and reduce the flow rate to its lowest level and disconnect the tubing from the in-line flow-through cell.

- Collect groundwater samples directly from the end of the tubing into clean laboratory-prepared labeled bottles.

- Handle and ship the samples according to the procedures outlined in the remainder of this document.

- Metal analysis will be for total metals unless the last turbidity reading is greater than 10 NTU, then both filtered and non-filtered samples will be collected. A 0.45 micron filter will be used.

- After sample collection is complete, remove the pump and the tubing. Tubing will be properly disposed after the well is sampled.

- Measure the total depth of the well.

- Return all purge water containerized in a bucket back into the well, at the completion of sampling.

- Secure the well by replacing the cap/cover/J-plug and locking the protective casing.

The above procedures will be used for collecting all types of samples including investigative and quality control (QC) samples. **Table 3-3** presents the well purging and sampling field data sheet to be used during all well sampling efforts.

3.4 SAMPLE IDENTIFICATION

A unique field sample identification code will be assigned to each sample collected. For water samples, the identification code will consist of the following three parts separated by hyphens:

Part 1		Part 2		Part 3
MW01	-	110303	-	01
Location Identification Code	-	Collection Date Identification Code (03 Nov 2003)	-	Sample Type Identification Code

3.4.1 Location Identification

The *Location Identification Code* will not exceed six characters in length. Location identification codes will be unique identifiers consisting of character codes that describe the sample type and location. Note that numbers 1-9 shall be written as two-digit numbers (i.e., 01-09).

3.4.2 Collection Date

The *Collection Date* portion of the sample identification code will not exceed six characters in length. The six-character date code will be:

MMDDYY

-MM—signifies a two-digit numeric code representing the month the sample was collected (01=January, 02=February, 03=March, 04=April, 05=May, 06=June, 07=July, 08=August, 09=September, 10=October, 11=November, 12=December).

-DD—signifies a two-digit numeric code representing the day the sample was collected. Valid values will include numbers from 01 to 31.

-YY—signifies a two-digit numeric code representing the year the sample was collected.

3.4.3 Sample Type

The *Sample Type* will be a two-digit number representing the sample QC type. The table below lists and describes the possible QC types.

QC Code	Description
01	Normal Sample
02	Field Duplicate Sample
03	Equipment Blank Sample
04	Trip Blank Sample

4. FIELD MEASURED PARAMETERS

This section describes the procedures for conducting field measurements of water level, turbidity, pH, Eh, D.O., temperature, and specific conductivity. This section also describes the procedures for maintaining the accuracy of all the instruments that will be used for conducting field measurements during the monitoring program.

4.1 FIELD MEASURED PARAMETERS

Seven parameters will be measured at each well location prior to collecting the groundwater samples. These parameters will include water level, turbidity, pH, Eh, DO, temperature, and specific conductivity.

A groundwater level measurement will be obtained at each monitoring well prior to purging using an electronic water level meter. Once purging has started, field parameters for turbidity, pH, Eh, D.O., temperature, and specific conductivity will be recorded every five minutes. The groundwater will be monitored until the parameters have equalized. Equalization is defined as three consecutive readings within the ranges specified in Section 3.3.

4.2 CALIBRATION PROCEDURES AND FREQUENCY

Instruments and equipment used to gather, generate, or measure environmental data will be calibrated with sufficient frequency and in such a manner that the accuracy and reproducibility of results are consistent with the manufacturer's specifications. All field instruments will be calibrated and maintained by trained personnel.

Equipment to be used during the field sampling will be examined to certify that it is in good operating condition. This includes checking the manufacturer's operating manual and the instructions for each instrument to ensure that all maintenance requirements are being observed. Field notes from previous sampling trips will be reviewed so that any prior equipment problem is not overlooked and all necessary repairs to equipment have been made.

Field instruments to be used at the site include:

- pH meter.
- Turbidity meter.
- Eh meter.

- D.O. meter.
- Thermometer.
- Specific conductance meter.
- Water level indicator/electronic sounding device.

The calibration and checkout of all field instruments will be performed prior to use each day. All calibration performed in the field will be documented in the field logbook. A master calibration/maintenance file will be maintained for each measuring instrument and will include at least the following information:

- Name of device or instrument calibrated.
- Results of calibration.
- Name of person performing the calibration.
- Identification of the calibration media (e.g., pH buffer solutions).

5. DECONTAMINATION PROCEDURES

Field equipment used during field purging and sampling will be decontaminated prior to use to reduce contamination and cross-contamination in accordance with the guidelines and procedures set forth in this document. These procedures are necessary to ensure QC in decontamination of field equipment and to serve as a means to identify potential errors in the sample collection and sample handling procedures.

After the collection of the required samples, decontamination of all field sampling equipment, and field instruments will be conducted in a thorough and step-wise manner as described below. New disposable latex gloves will be worn when handling clean sampling equipment to ensure that the equipment is not contaminated. Decontamination procedures shall be documented in the field logbook.

All reusable sampling and monitoring equipment will be decontaminated between uses as follows:

- Rinse thoroughly with potable water.
- Scrub with Alconox and water wash to remove any visible residue.
- Rinse with deionized water.

After each sample container is filled and capped, it will be cleaned by wiping the outside surface thoroughly to remove dirt or other visible signs of potential contamination.

The exterior of each shipping container used to transport samples to the laboratory will be decontaminated in accordance with the following procedures:

- Place all the sample containers into the approved shipping container
- Wipe all outside surfaces of the cooler thoroughly to remove dirt or other visible signs of potential contamination.

All disposable field equipment will be disposed into a licensed sanitary landfill. The minimal volume of decontamination fluid will be disposed onto the ground surface at each well location.

6. SAMPLE ANALYSIS

Groundwater samples will be collected from 11 specified GMP monitoring wells on a semi-annual basis (MW-11, MW-14, MW-17, MW-21, MW-22, MW-24, MW-26, MW-28, MW-28C, MW-B1, MW-0S3) and from six wells on an annual basis (deep wells MW-B2, MW-J2, MW-OS1C, MW-OS3C, shallow wells MW-2, MW-25). All groundwater samples will be analyzed by TriMatrix Laboratories, located in Grand Rapids, Michigan.

6.1 SITE-RELATED CHEMICALS

As described in **Table 2-1**, GMP monitoring well samples will be analyzed for volatile organic compounds (VOCs), and/or Michigan 10 total and dissolved (if needed) metals, nickel, hexavalent chromium, and total cyanide. VOC samples will be collected in two 40 mL glass containers and preserved with hydrochloric acid to a pH less than 2. Analysis and detection limits will be in accordance with U.S. EPA Method SW-846/8260. Non-filtered samples for total metals will be collected in a 500 mL HDPE container and preserved with nitric acid (HNO_3) to a pH of less than 2. Following the last turbidity reading, a field filtered sample for dissolved metals will be taken only if the turbidity is above 10 NTU, replaced in a 500 mL HDPE container, and preserved with HNO_3 to a pH of less than 2. All total and dissolved metal samples will be analyzed using U.S. EPA Method SW-846/7000/6010. The hexavalent chromium sample will be containerized in a 250 ml HDPE bottle and cooled to 4 degrees Celsius. The total cyanide sample will be collected in an amber 500 mL container and preserved with sodium hydroxide (NaOH) to a pH of greater than 12. Selected cyanide samples will also be analyzed for free/amenable cyanide on a regular basis, if the detected total cyanide concentrations are greater than the Final Acute Value of 44 ug/L. The holding time for preserved VOC samples is 14 days. The holding time for preserved metals samples is 6 months (13 days for mercury). The holding time for cyanide samples is 14 days. The holding time for hexavalent chromium is 24 hours. All analytical detection limits will meet the requirements set forth in MDEQ-RRD Operational Memorandum #6.

6.2 NATURAL ATTENUATION ANALYSES

A Monitored Natural Attenuation MNA assessment will be made as part of the short-term groundwater monitoring program to aid in the determination of ongoing VOC breakdown processes already taking place within the shallow and deep aquifers at the FST site, and to provide an indication of the effectiveness of the 2003 IM source removal activities. In addition, the acquired MNA data can be used as needed to assess potential fate and transport conditions on- and off-site as an added safeguard to the conservative, risk-based corrective measures program. Selected monitoring wells will be sampled for a variety of MNA parameters, including but not limited to:

- Oxidation-Reduction Potential (ORP)
- Sulfates/Sulfites
- Nitrates/Nitrites
- Ferrous/Ferric Iron
- Alkalinity
- Hardness
- Manganese
- Chemical Oxygen Demand (COD)
- Ethane and Ethene

During the first year of groundwater monitoring, shallow and deep groundwater will be tested at up to eight locations upgradient, within the center of the contaminant plume(s), and at the margins of the plume(s).

7. QUALITY ASSURANCE/QUALITY CONTROL PROGRAM

The following section contains the Quality Assurance/Quality Control (QA/QC) program for the GMP. The scope of the monitoring program includes field testing and measurement, as well as the collection and analysis of environmental samples. All tasks that include monitoring and measurement activities, and those that generate or process environmental data, will adhere to the QA/QC requirements described in this section.

7.1 SAMPLE HANDLING

All samples collected will be handled in a manner that maintains the integrity of samples and meets the regulatory requirements. In order for the sample to be representative, the following procedures will be used before, during, and after sample collection.

- Sample containers used for collecting samples will be certified clean.
- Sample containers will be pre-preserved under laboratory conditions. This technique will minimize the sources of contamination in the field.
- Sampling containers will be opened just before sample collection. The pre-preserved 40-ml containers will be immediately closed without any sample headspace after the sample has been collected to minimize the loss of VOCs. The pre-preserved metals and cyanide containers will be tested with pH paper after they have been filled to verify that they have been preserved to a pH of <2 and >12 for metals and cyanide analyses, respectively.
- To prevent contamination, the inside of the container will not be touched.
- To ensure VOC sample integrity, all gasoline or diesel engines will be turned off near and upwind of the sample locations. This precaution will prevent the introduction of VOCs into the sample.
- Samples will be collected in a manner that will minimize the introduction of foreign material such as rain and snow.
- Holding times, containers and preservatives as discussed in Section 6 will be strictly adhered to, in order to maintain sample integrity and meet regulatory requirements.

- Immediately upon collection, samples will be stored in an ice-filled cooler. Samples will be stored and shipped at a temperature no greater than 4 degrees Celsius.

- Analytical methods discussed in Section 6 will be used. These analytical methods will most accurately and precisely represent the true concentration of the parameter of interest.

- Decontamination procedures as discussed in Section 5 will be used before and between sample collection to prevent contamination and cross-contamination of samples.

7.2 FIELD QUALITY CONTROL SAMPLES

Any contamination of samples resulting from sampling equipment, sample handling, and sampling techniques can be identified through the collection and analysis of field QC samples. The laboratory will be kept from using these samples for internal QC samples by indicating which samples are to be used for internal QC on the chain-of-custody record. The following subsections detail the type and number of field QC samples that will be collected during the monitoring program.

7.2.1 Field Blanks

Field blank samples are collected and analyzed to check for procedures at the site that may cause sample contamination. A common type of field blank sample is the field equipment blank. One field equipment blank will be collected during each sampling event.

Field equipment blanks will be obtained by transferring ultra-pure water through clean sample tubing into a sample container. Each field equipment blank will be analyzed for the same parameters as the investigative samples and in accordance with the same analytical methodologies. When collecting a field blank, the sample for VOCs will be collected first, followed by other parameters. All field blanks will be identified as such on all sample documentation.

7.2.2 Trip Blanks

Trip blanks are used to assess the potential for contamination of samples due to contaminant migration during sample shipment and storage. Trip blanks generally pertain to VOC samples only and are prepared prior to the sampling event by the laboratory in 40 mL vials and are kept with the investigative VOC samples throughout the sampling event. They are then packaged for shipment with the other VOC samples and sent for analysis.

One trip blank will accompany every shipment containing VOC samples. Trip blanks will be analyzed only for VOCs in accordance with the analytical methodologies of investigative VOC samples.

7.2.3 Field Duplicate Samples

Field duplicate samples will be collected from selected monitoring wells at a frequency of 1-per-10 investigative samples, using procedures identical to those used for the investigative samples. Duplicate samples will be analyzed for the same parameters as the investigative samples. Duplicate samples will be collected by alternately filling two sets of sample bottles from the same sampling equipment. The VOC fraction for each duplicate sample will be collected immediately after the VOC fraction for the investigative sample to minimize the possibility of loss of VOCs during sample collection.

7.2.4 Matrix Spike/Matrix Spike Duplicate Samples

Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples will be collected from selected monitoring wells at a frequency of 1-per-20-investigative samples, using procedures identical to those used for the investigative samples. MS/MSD samples will be analyzed for the same parameters as the investigative samples. MS/MSD samples will be collected by alternately filling two sets of sample bottles from the same sampling equipment. The VOC fraction for each duplicate sample will be collected immediately after the VOC fraction for the investigative sample to minimize the possibility of loss of VOCs during sample collection.

7.3 LABORATORY QUALITY CONTROL PROGRAM

The overall QC objectives for laboratory analyses are to produce data of known and sufficient quality. Appropriate procedures and quality control checks will be used so that known and acceptable levels of accuracy and precision are maintained for each data set. This section defines the objectives for accuracy, precision, and completeness, for measurement data. How the accuracy, precision, and completeness results will be assessed is also discussed in the following subsections.

7.3.1 Accuracy

Accuracy of measurement data is defined as the degree of agreement between a measurement, X, with an accepted reference or true value, T. It is usually expressed as the difference between the two values, X-T, the difference as a percentage of the reference of true value 100(X-T)/T, and sometimes expressed as a ratio, X/T. These expressions give a measure of the bias in a system.

7.3.1.1 Accuracy Goals for Laboratory Measurement

Accuracy of laboratory analyses will be assessed using the following quality control checks: calibration standards, surrogate spikes of all samples, laboratory control samples (LCS), and matrix spikes of selected samples collected in the field. Surrogate spike, LCS, and matrix spike results will be expressed as a recovery of an analyte added to the sample at a known concentration:

$$\textit{Percent Recovery} = \text{SSR - SR / SA x 100 } \textit{Percent}$$

Where:

SSR	=	spiked sample result
SR	=	sample results (not applicable for surrogate recovery)
SA	=	amount of spike added

Calibration check standards are expressed as a percent difference from the true value, i.e., 100 (X-T)/T. The frequency and acceptance criteria for the accuracy quality control checks for groundwater analyses will be in accordance with the laboratory Quality Assurance Project Plan (QAPP) in **Appendix A** of this GMP Plan.

7.3.1.2 Accuracy Assessment

Results of quality control checks which monitor accuracy will be evaluated against the acceptance criteria and advisory limits shown. If the results are outside the criteria, then data validators will determine if the associated data is 1) left unqualified and identified as usable; 2) qualified as "J", estimated; or 3) qualified as "R", unusable. If feasible, an estimated amount of bias in the "J" results and unqualified results will be made and taken into account in using the data. Data qualified as "R" will not be used.

7.3.2 Precision

Precision is a measure of mutual agreement among individual measurements of the same property, usually under prescribed similar conditions. Precision is expressed as a standard deviation among a group of measurements or as a relative percent difference between two measurements.

7.3.2.1 Precision Goals for Laboratory Measurements

Precision of laboratory analysis will be assessed by analyzing duplicate samples or matrix spike duplicates, blank spike duplicates, and/or by analyzing aliquots (sample replicates) of one sample. Analysis of duplicate samples measures the precision of both the sampling and analysis, whereas a sample replicate, generally measures only the analytical precision. Precision of the duplicate and replicate analyses will be expressed as a relative percent deviation (RPD) for evaluation of two results, and relative standard deviation (RSD) for evaluation of three or more results. The frequency, acceptance criteria, and corrective actions for duplicate and replicate samples will be in accordance with the laboratory QAPP (**Appendix A**).

7.3.2.2 Precision Assessment

Results of QC results, which monitor precision, will be evaluated against the goals, indicated in the laboratory QAPP (**Appendix A**). The results of laboratory duplicates and replicates in the field will indicate the amount of variability in the measurement process. Those percent RPDs which are outside the criteria will be taken into account as data is evaluated. The results of collected samples duplicates will indicate the amount of variability in 1) the sample matrix, 2) sampling technique, and 3) analytical technique. Since the three sources of variability cannot be distinguished in the results and the sample matrix may not be altered to improve the variability, the percent RPD results will be noted. The variability in one sample may not represent variability for all investigative samples, but will serve as a general indicator of sample variability. Sample conditions, constituents, and location will be taken into account in this assessment.

7.3.3 Completeness

Completeness is a measure of the amount of data obtained from a measurement system that achieves the project goals, compared to the amount expected under normal conditions. Completeness is affected by unexpected conditions that may occur during the data collection process. Occurrences that reduce the amount of data collected include events such as a dry well, an instrument breakdown, or a loss of sample extract. All reasonable attempts will be made to minimize loss of data (e.g., through regular maintenance of instruments, and replacing/repairing instruments that have broken down and to recover lost data.

7.3.3.1 Completeness Goals for Laboratory Measurements

Completeness goals for this program have been established for laboratory analyses. The completeness goal for each individual laboratory analyses is 90 percent. For critical data points, consisting of one upgradient data point, the completeness goal for sample collection and analysis is 100 percent. The following equation will be used for calculating completeness of laboratory analyses:

Completeness = Number of valid data points / Number of data points collected x 100 *Percent*

Difficulties encountered during the sampling handling in the laboratory, as well as unforeseen complications regarding analysis methods may affect completeness during sample analysis. For example, the analytical methods proposed for use (particularly for the organic analyses) are intended for analysis of "environmental samples" (low- and medium-level), and the applicability of these methods to unknown or hazardous-level samples may result in poor method performance and would, therefore, have an adverse impact on achieving the data completeness goal. Valid data points are defined as those results identified as usable for the intended purpose.

7.3.3.2 Completeness Assessment

Completeness will be monitored and assessed by the following guidelines:

1. Completeness of laboratory results will be monitored as data are validated. Those results identified by the validators as unusable due to laboratory performance and those results identified by the data users as unusable due to the amount of bias in the results are considered not valid. The necessity for re-sampling to retrieve valid data points will be assessed on a case-by-case basis and will be based on:

   - Whether the incomplete data point is a critical data point;
   - Whether the invalid analyte(s) is a parameter of concern at the site; and
   - Whether there are enough data points to accomplish the purpose of the investigation.

2. Completeness of the samples collected will be monitored during sample collection to ensure that all planned locations and depths are completed. If a sample location is not obtained, the field manager will ensure that every reasonable attempt is made to collect the sample(s). If conditions do not allow the sample(s) to be collected, then the

appropriate project managers will be notified and the deviation documented for the files.

3. Completeness of field measurements will be monitored during field activities to ensure that all field measurements and associated QC checks are performed. Field measurements taken without the required QC checks will be considered incomplete.

7.4 FIELD DATA DOCUMENTATION

Field logbooks will be assigned to individual field personnel for the duration of their stay in the field, but will be stored at an appropriate document management area when not in use. Field data sheets, sampling sheets, notebooks, and records will be marked with the project work order number. This number will allow for data generated during the monitoring program to be traced back to the project. Identification of paperwork with this number will help prevent loss of data during its use and assimilation by allowing misfiled or misplaced documents that are found to be traced to the appropriate file.

All data collection activities performed at a site will be documented in a bound field logbook with numbered pages. The entries will be as detailed and descriptive as possible so that a particular situation can be recalled without reliance on the collector's memory. All field logbook entries will be dated.

The cover of each logbook will contain the following information:

- Logbook number.
- Project name.
- Project work or control number.

To ensure the most useful, organized, and complete field notes, the following procedures for setting up and using a field logbook will be followed:

- Field logbooks will be issued only to field personnel actively involved in a task.
- Each book will be identified by the project-specific work number.
- The title page of each logbook will contain:
    1. Person and name of organization to whom the book is assigned.
    2. Book number.

3. Project work or control number.
4. Location and activity for logbooks designated to specific tasks.
5. Start date.
6. End date.

- Entries into the logbook will contain a variety of information. Each entry will include some or all of the following, as appropriate:

1. Date and time.
2. Name of individual making the entry.
3. Description of test/activity.
4. Quantities of any materials used.
5. Drawings and information related to activity as necessary.
6. Conditions that might adversely affect the test/activity.
7. Names of witnesses, observers, or others present.
8. Samples collected, received, or released, including description of sample, sample number, and sample collection time.
9. Deviations from the approved procedures for that activity.
10. Data that are not recorded by automatic methods.
11. Level of personnel protection equipment (PPE) being used.
12. Description of the sample location, including distance to grid nodes or other permanent features.
13. Numerical designation for any photographs taken.
14. Listing of equipment used to make field measurements.
15. Calibration data for field instrumentation.
16. Calculations performed.
17. Date and reason for downtime or delays.
18. Visitors and purposes of the visit.
19. Weather conditions.

- The log will be closed at the end of each day's activity, with the time and signature of the person making the last entry.

- Log openings and closings will have no open lines in between so that no unauthorized entries can be made.

- All entries will be described in as much detail as possible so that reconstruction of events does not depend on memory. (Examples of such detail include locations, samples, descriptions, depths, containers, measurements, equipment, dates of calibration, photographs, etc.)

- All entries will be made in waterproof, black or blue indelible ink, with no erasures.

- Corrections to entries will be made by crossing out the error with one line, dating and initialing the error, and entering the correction above or beside the error. Each page entered on in the logbook will be signed and dated by the individual. Once an entry has been signed and dated, changes, deletions, or additions are made only as a new entry and refer back to the original entry rather than crossing it out. A new page in the field notebook will be started when the previous page is full or when the previous page has been marked, dated, and signed so that no entries can be made. Pages shall not be removed from the bound notebook.

7.5 CHAIN-OF-CUSTODY PROCEDURES

Sample custody procedures to be followed during the groundwater monitoring field activities require that the possession and handling of each sample from the moment of its collection through analysis be documented by written record. A sample is in someone's custody when one of the criteria listed below has been satisfied:

1. The sample is in one's actual possession.
2. The sample is in one's view after being in one's physical possession.
3. The sample is in one's physical possession and is then locked up so that no one can tamper with it.
4. The sample is kept in one's possession and is then sorted in a secured area that is restricted to authorized personnel only.

Samples will consist of material collected in the field, such as water, and any reagents added for the purpose of sample preservation.

7.5.1 Sample Labels

All samples will be identified with a label attached directly to the container. Sample label information will be completed prior to filling the container with the sample using waterproof blue or black ink. The labels will contain the following information:

- Sample number.
- Date of collection.
- Installation name.
- Parameters to be determined.
- Preservative (if any).
- Sample source/location depth.

7.5.2 Chain-of-Custody Record

To maintain a record of sample collection, transfer between personnel, shipment, and receipt by the laboratory, a chain-of-custody form will be filled out for each sample as it is collected by the field sampler. Each time the samples are transferred, the signatures of the persons relinquishing and receiving the samples, as well as the date and time of transfer, will be documented.

Chain-of-custody seals will be used to determine if any tampering has occurred during shipment of samples. These signed and dated seals or other tamper-evident locking device will be placed on all shipment containers by the person responsible for packaging. If the chain-of-custody seals are not intact at the time the shipping containers are received by the laboratory, the laboratory project manager will notify the field manager within 24 hours of container receipt.

7.5.3 Transfer of Custody and Shipment

Prior to shipment of samples, the chain-of-custody record will be signed and dated by the field sample custodian who has verified that those samples indicated on the record are indeed being shipped. A copy of each chain-of-custody form will be retained in the project files, and the original will be sent with the samples (sealed inside the shipping container). After packaging has been completed, custody seals, signed and dated by a member of the field team, will be placed on the shipping container.

Samples collected will be handled and shipped in a manner that will protect against any detrimental effects on the samples or the environment due to breakage, leakage, or spoilage. Sample handling procedures will be closely supervised and recorded to minimize the potential for loss, modification, or tampering during shipment to the analytical laboratory. Package labeling specifications will depend on the type of materials being sent, and will be in accordance with Department of Transportation (DOT) regulations (49 CFR, Parts 171 through 177) and International Air Transport Authority (IATA) guidelines. Samples of hazardous materials will be stored and handled in accordance with all applicable Federal and State requirements.

7.5.4 Laboratory Custody Procedures

Sample custody procedures in the laboratory include the procedures for general security, sample receipt, storage, preparation and analysis. The following subsections describe the minimum general requirements that will be followed by the laboratory.

7.5.4.1 Sample and Hardcopy Data Custody and Control

For a sample or for hardcopy data generated from analyzing a sample to be handled according to legal COC requirements, it must be:

- in the physical possession of an authorized field or laboratory staff member, or authorized transferee, or
- after physical possession of an authorized staff member, in the staff member's view, or
- secured (after physical possession) to prevent tampering, or
- placed in a designated secure area with restricted access.

Any change of possession or custody is documented on a COC form, and must include the names of the individuals relinquishing and receiving the sample or data. The date and time of transfer is also noted. Any correction to COC information is made by drawing a single horizontal line through the incorrect entry, and printing the correct entry adjacent to the original entry. All corrections are initialed and dated.

The person responsible for initiating COC in the laboratory is the receiving clerk. The receiving clerk signs and dates the COC form. The samples are then assigned unique, sequential six-digit identification numbers by the Laboratory Information Management System (LIMS).

Once the receiving clerk has logged in and documented the receipt of the sample, the sample is relinquished to the sample custodian on duty. The sample custodians and the supervisor of the Sample Control department have keys that unlock the sample storage coolers. Samples are filed in walk-in coolers until laboratory staff request specific samples by completing internal COC forms or batch sheets.

The internal COCs are completed the same way, and the sample custodian relinquishes the samples to the laboratory staff member. The internal COC form is used to document the sample's movement from the custodian to the analyst to final disposition.

The sample custodian is responsible for purging raw samples from cold storage at the prescribed time. Unused raw samples are stored in a controlled temperature environment for 60 days after data submission to the client. Sample report dates are documented in the LIMS. Sample labels are color coded and placed in the cooler by date of receipt, allowing bottles to be easily retrievable from the storage unit shelves, once segregated by the sample custodian, the hazardous waste technician completes the preparation for discarding the identified samples for hazardous waste disposal.

Each laboratory area has it own planner from the Production Planning and Control (PP&C) department. Daily worklists are generated from the LIMS to assist PP&C staff in scheduling samples for preparation or analysis. The person who prepares or analyzes the sample accepts possession of the sample. Samples are transferred by cart, under COC, from the walk-in cooler to the laboratory area in which the samples are needed.

The LIMS schedules the appropriate analyses for samples and automatically tracks the progress of samples through the laboratory. The custody of a sample may be determined at any time by reviewing the scheduling details within the LIMS. Signatures and employee ID numbers on the internal COCs, sample preparation and analytical worksheets, and sequence run logs are used as a paper trail to document the physical transfer of the samples, and to document exactly who handled the samples at each stage of processing.

Hardcopy reports are stored and numbered to maintain strict document control. The document control clerk maintains an inventory of all hardcopy data stored. Hardcopy data are filed according to case and sample deliver group (SDG) member. The data are stored both at an off-site warehouse and in the laboratory in a secured area accessible by authorized entry only.

7.5.4.2 Electronic Data Custody and Control

The mainframe and minicomputer systems at TriMatrix Laboratories are secured by using assigned log-on accounts and individual passwords. Menu options are available to authorized users only, and are controlled by software that uses local attributes. These local attributes are created and maintained by the computer operations analyst. Users are allowed access only to those portions of the systems that are necessary for them to do their jobs.

Numerous forms, worksheets, and sequence run logs are generated from the computer systems and include analytical worksheets and the sample record. Individual laboratory non-analytical Standard Operating Procedures (SOPs) contain examples of these forms with instructions for completing them. Analytical results are reported on certain form templates either through direct electronic transfer from the instrument, indirect transfer via a local area network (LAN) linked to the instrument, or through manual data entry. All three mechanisms have specific security and QC features.

7.5.4.3 Logging in Samples

Bench Procedures

The following steps are completed for all samples as they are received by TriMatrix Laboratories.

Each sample container is inspected before it is opened to make sure that it has not been damaged or opened during shipment. Any padlocks, sealing tape, or custody seals on the samples are inspected to make sure that they are intact, and any observations are recorded on the COC form. If the custody seals, tapes, or padlocks are broken, the commercial client is contacted through Customer Service for permission to continue processing.

Vials containing samples to be analyzed for VOCs are checked to ensure that there is no headspace or air bubbles. Sample identification information on the bottles is compared to the Traffic Reports (TRs), packing lists, and COC form included in the container. Any discrepancies are noted on the COC by the receiving clerk. The Customer Service department notifies commercial clients if there are discrepancies.

Sample Control department personnel accept custody of samples by signing and dating the COC form. Samples are logged onto a Commercial Receiving Log Sheet. The following items, where applicable, are noted on the sheet:

- case number
- matrix
- TriMatrix ID number
- temperature
- client name or order number
- analysis codes
- field ID (sample ID)
- volume received

- receiving date (RD)
- pH (inorganics only)*
- sampling date (SD)
- SampleSaver number

*Aqueous volatile sample pH is taken after analysis and documented in the data report.

The condition of the refrigerant (whether any ice remains or whether the cooling packs are solid) is checked and the temperature of a representative sample (liquid samples only) is ascertained by wrapping a temperature strip around the outside of the container. When it is apparent through these checks that a sample was not properly preserved, the client is notified an a standard QA Notice is completed and placed in the sample file.

On each COC that is complete and correct, the statement Received in Good Condition is written or stamped, initialed, and dated by the receiving clerk. This statement indicates that the sample or group of samples were received intact with correct sample tags or custody seals (if applicable), pH (applicable to inorganic samples), and corresponding documentation.

Each log sheet and COC is reviewed by the Sample Control department supervisor who ensures that all information is properly documented. Each is stamped as having been reviewed, initialed, and dated.

8. GROUNDWATER MONITORING REPORTS

8.1 SEMI-ANNUAL REPORT

The first semi-annual sampling event of each year, conducted in accordance with this GMP, will be documented through the preparation of a Semi-Annual Groundwater Monitoring Report for submittal to the EPA. These reports will provide the following information:

- Copies of laboratory analytical data sheets.
- Field log sheets.
- A text description of the field effort and analytical QA/QC results.
- A tabular summary of analytical results.

Semi-Annual Groundwater Monitoring Reports will be submitted to the EPA within 45 calendar days after the end of the first half of each calendar year.

8.2 ANNUAL REPORTS

By March 1st of each year an Annual Groundwater Monitoring Report will be submitted to the EPA in accordance with 40 CFR 265.94. The Annual Report will contain all of the information cited for the Semi-Annual Report, with the addition of the following information:

- A text description of groundwater flow conditions, groundwater chemistry results and observed trends, and any maintenance activities conducted on the groundwater monitoring system.
- Site maps illustrating the potentiometric surface contours for the two sampling events and the locations of observed Part 201 groundwater cleanup criteria exceedances.
- Text summaries of MNA findings.
- Text summaries of MDEQ Mixing Zone-required analyses.

Each Annual Groundwater Monitoring Report will also include a Conclusions and Recommendations Section to specifically document JCI's assessment of the GMP effectiveness based on historical and newly gathered site data, and to identify if needed, modifcations to the GMP or corrective measures strategies. The GMP effectiveness assessment will consider a variety of factors, including:

- Regulatory changes such as cleanup criteria and analytical methods modifications.
- The emergence of new/improved sample collection and field measurement methods.
- Observable changes in groundwater quality conditions such as localized contaminant concentration spikes or conversely, verifiable reductions in plume dimensions.
- FAV exceedances or other specific "triggers" to the contingency-based corrective measures program.
- The level and significance of observed natural attenuation processes.
- Mixing zone considerations.
- Monitoring well conditions and locations.

Based on this evaluation of the GMP effectiveness, recommendations will be presented for EPA concurrence (and MDEQ if required) to modify the GMP, such as:

- Add or remove wells from the GMP.
- Add or remove analytical parameters, including site contaminants and MNA parameters (especially inorganics, based on the slight GSI exceedances observed to date and the beneficial effects of the 2003 IM source removals).
- Modify the sampling frequency for some or all of the GMP wells.
- Change components of the corrective action program for groundwater, based on the contingency-based parameters cited in the final CMP. Appropriate reporting requirements would also be identified.

FIGURES

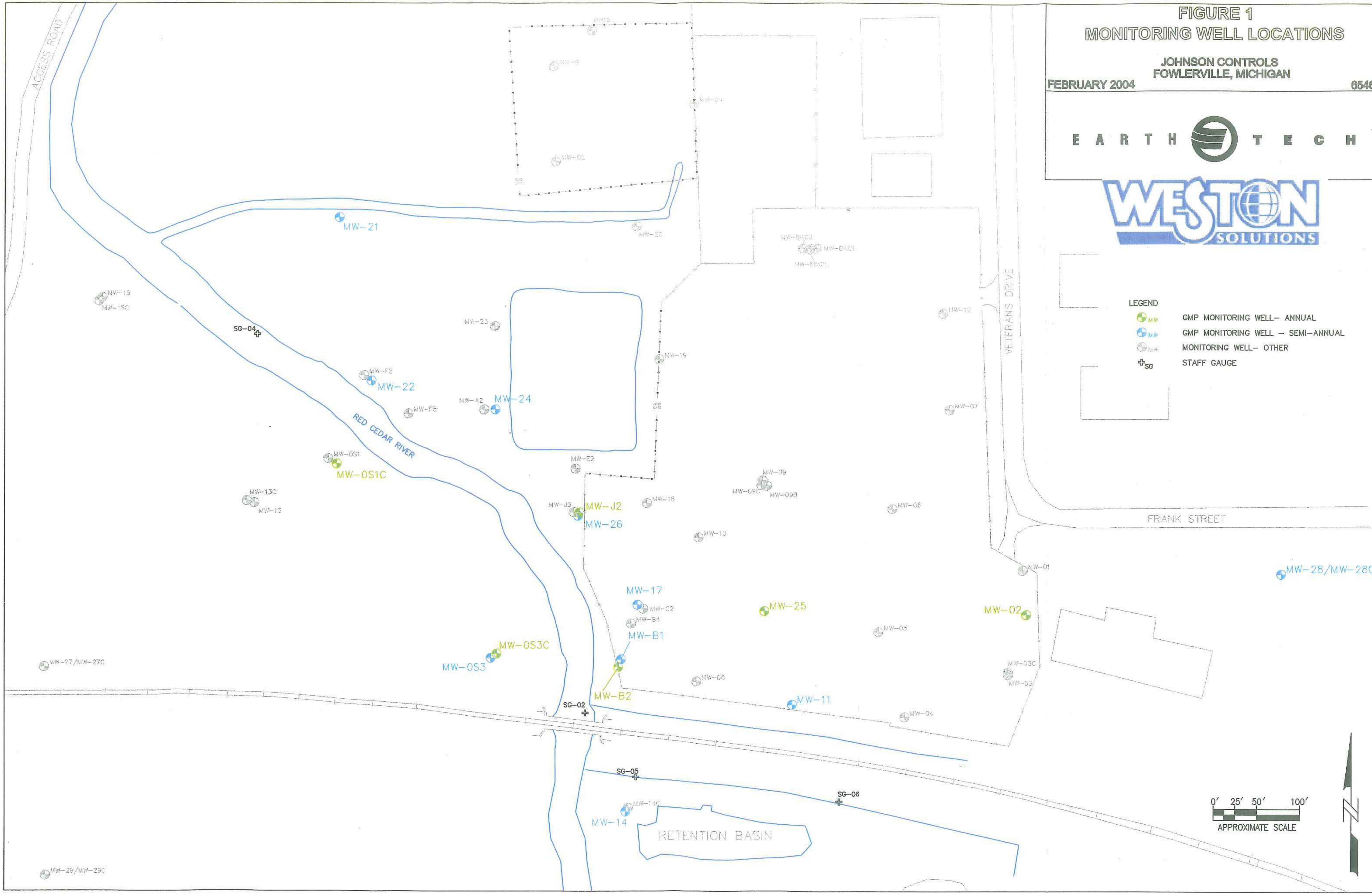

FIGURE 1
MONITORING WELL LOCATIONS

JOHNSON CONTROLS
FOWLERVILLE, MICHIGAN

FEBRUARY 2004 65468

TABLES

Table 2-1
Summary of Groundwater Monitoring Program
Well Selection Rationale and Sampling Description
Former Stanley Tools
Fowlerville, Michigan

	Monitoring Well ID	Aquifer	Location	Monitoring Objective	Sampling Frequency	Analytical Parameters*
1	MW-02	Shallow	Plume Interior	Performance/Attenuation Monitoring	Annual	VOC
2	MW-11	Shallow	S Plume Margin	Onsite Plume Boundary	Semi-Annual	VOC, CN-, METALS
3	MW-14	Shallow	SW Margin at River-Offsite	GSI Compliance Well and Offsite Plume Boundary Monitoring	Semi-Annual	VOC
4	MW-17	Shallow	Plume Interior at River	GSI Compliance Well and Performance/Attenuation Monitoring	Semi-Annual	VOC, CN-, METALS
5	MW-21	Shallow	NW Margin Near River	GSI Compliance Well	Semi-Annual	VOC, CN-, METALS
6	MW-22	Shallow	NW Margin at River	GSI Compliance Well	Semi-Annual	VOC, CN-, METALS
7	MW-24	Shallow	NW Margin Near River	GSI Compliance Well	Semi-Annual	VOC, CN-, METALS
8	MW-25	Shallow	Plume Interior	Performance/Attenuation Monitoring	Annual	VOC
9	MW-26	Shallow	W Margin at River	GSI Compliance Well	Semi-Annual	VOC, CN-, METALS
10	MW-28	Shallow	Upgradient/Background-Offsite	Background Groundwater Quality	Semi-Annual	METALS
11	MW-B1	Shallow	SW Margin at River	GSI Compliance Well, Performance/Attenuation Monitoring, and LNAPL Rebound Testing	Semi-Annual	VOC, CN-, METALS
12	MW-OS3	Shallow	West Side of River	Offsite Plume Boundary Monitoring	Semi-Annual	VOC, CN-, METALS
13	MW-OS3C	Deep	West Side of River	Offsite Plume Boundary Monitoring	Annual	VOC, CN-, METALS
14	MW-28C	Deep	Upgradient/Background-Offsite	Background Groundwater Quality	Semi-Annual	METALS
15	MW-B2	Deep	SW Margin at River	Vertical Plume Monitoring	Annual	VOC, CN-, METALS
16	MW-J2	Deep	W Margin at River	Vertical Plume Monitoring	Annual	VOC, CN-, METALS
17	MW-OS1C	Deep	W Margin at River	Offsite Vertical Plume Monitoring	Annual	VOC, CN-, METALS

*Note: MNA parameters will be analyzed from selected well samples as described in Section 6.2.

Table 2-2
Monitoring Well Construction and Water Level Elevation Summary
Former Stanley Tools Site
Fowlerville, Michigan

									October 6, 2003		October 9, 2003		October 13, 2003		October 17, 2003		October 21, 2003		November 3, 2003		December 3, 2003		December 3, 2003		December 18, 2003	
Well ID#	Original Ground Surface(ft) pre-IM	Present Ground Surface(ft) as of 12/03	TOC (ft)	Well TD from Original GS	Boring TD from Original GS	Screen Length (ft)	Top of Screen Elevation (ft)	Bottom of Screen Elevation (ft)	Depth to Water (ft)	Water Elevation (ft)	Depth to Water (ft)	Water Elevation (ft)	Depth to Water (ft)	Water Elevation (ft)	Depth to Water (ft)	Water Elevation (ft)	Depth to Water (ft)	Water Elevation (ft)	Depth to Water (ft)	Water Elevation (ft)	Depth to Water (ft)	Water Elevation (ft)	Depth to Water (ft)	Water Elevation (ft)	Depth to Water (ft)	Water Elevation (ft)
MW-01	888.96	888.24	891.91	13.00	15.00	5.00	880.96	875.96	9.08	882.83	9.13	882.78	9.21	882.70	8.55	883.36	8.93	882.98	8.09	883.82	8.23	883.68	8.23	883.68	8.49	883.42
MW-02	888.09	888.19	890.38	14.00	30.00	2.50	876.59	874.09	8.01	882.37	8.02	882.36	8.02	882.36	7.89	882.49	7.94	882.44	7.56	882.82	7.48	882.90	7.48	882.90	7.59	882.79
MW-03	888.14	888.48	890.70	15.00	15.00	5.00	878.14	873.14	8.26	882.44	8.28	882.42	8.27	882.43	8.10	882.60	8.19	882.51	7.72	882.98	7.68	883.02	7.68	883.02	7.79	882.91
MW-03C	888.17	888.07	890.11	47.00	48.00	10.00	851.17	841.17	7.63	882.48	7.68	882.43	7.65	882.46	7.50	882.61	7.56	882.55	7.79	882.32	7.10	883.01	7.10	883.01	7.18	882.93
MW-04	887.91	887.97	889.84	14.00	15.00	10.00	883.91	873.91	7.59	882.25	7.62	882.22	7.61	882.23	7.44	882.40	7.57	882.27	6.90	882.94	6.88	882.96	6.88	882.96	7.01	882.83
MW-05	888.53	888.73	891.14	14.00	15.00	5.00	879.53	874.53	8.96	882.18	8.97	882.17	8.96	882.18	8.82	882.32	8.88	882.26	8.52	882.62	8.48	882.66	8.48	882.66	8.56	882.58
MW-06	887.88	888.09	890.72	15.00	15.00	5.00	877.88	872.88	8.41	882.31	8.42	882.30	8.41	882.31	8.30	882.42	8.35	882.37	8.05	882.67	7.93	882.79	7.93	882.79	8.02	882.70
MW-07	886.27	886.27	885.95	18.50	30.00	7.50	875.27	867.77	3.50	882.45	3.51	882.44	3.56	882.39	3.42	882.53	3.45	882.50	-	-	3.10	882.85	3.10	882.85	3.15	882.80
MW-08	887.27	886.81	890.19	10.00	12.00	5.00	882.27	877.27	9.18	881.01	9.12	881.07	9.10	881.09	9.05	881.14	9.11	881.08	8.58	881.61	8.68	881.51	8.68	881.51	8.81	881.38
MW-09	887.95	887.27	889.81	11.00	13.00	5.00	881.95	876.95	7.90	881.91	7.89	881.92	7.85	881.96	8.42	881.39	7.78	882.03	7.48	882.33	7.38	882.43	7.38	882.43	7.50	882.31
MW-09B	887.41	887.47	890.42	35.00	37.00	5.00	857.41	852.41	8.55	881.87	8.55	881.87	8.50	881.92	7.74	882.68	8.47	881.95	8.12	882.30	8.07	882.35	8.07	882.35	8.16	882.26
MW-09C	887.85	887.20	890.49	53.00	55.00	5.00	839.85	834.85	8.57	881.92	8.71	881.78	8.50	881.99	8.52	881.97	8.55	881.94	-	-	8.08	882.41	8.08	882.41	8.17	882.32
MW-10	887.18	887.23	889.95	12.00	14.00	5.00	880.18	875.18	8.85	881.10	8.71	881.24	8.66	881.29	8.59	881.36	8.64	881.31	8.30	881.65	8.22	881.73	8.22	881.73	8.35	881.60
MW-11	887.92	887.52	890.93	14.00	34.50	10.00	883.92	873.92	9.61	881.32	9.58	881.35	9.57	881.36	9.42	881.51	9.57	881.36	8.92	882.01	9.15	881.78	9.15	881.78	9.30	881.63
MW-12	885.68	885.68	885.33	20.00	20.00	7.50	873.18	865.68	2.79	882.54	2.81	882.52	2.82	882.51	2.75	882.58	2.76	882.57	-	-	2.41	882.92	2.41	882.92	-	-
MW-13	880.72	880.72	882.56	10.00	10.00	5.00	875.72	870.72	4.03	878.53	4.13	878.43	4.13	878.43	3.54	879.02	3.64	878.92	2.51	880.05	2.68	879.88	2.68	879.88	2.80	879.76
MW-13C	880.73	880.73	882.81	38.00	38.00	5.00	847.73	842.73	4.01	878.80	4.07	878.74	4.13	878.68	3.59	879.22	3.71	879.10	2.69	880.12	2.88	879.93	2.88	879.93	2.99	879.82
MW-14	883.54	883.54	883.14	14.00	14.00	5.00	874.54	869.54	4.26	878.88	4.38	878.76	4.41	878.73	3.43	879.71	4.04	879.10	2.82	880.32	3.53	879.61	3.53	879.61	3.56	879.58
MW-14C	883.33	883.33	882.91	40.00	41.00	5.00	848.33	843.33	3.82	879.09	3.91	879.00	3.93	878.98	3.84	879.07	3.60	879.31	2.51	880.40	3.03	879.88	3.03	879.88	3.13	879.78
MW-15	881.74	881.74	884.37	10.00	10.00	5.00	876.74	871.74	5.74	878.63	5.84	878.53	5.85	878.52	5.32	879.05	5.49	878.88	4.26	880.11	4.78	879.59	4.78	879.59	4.85	879.52
MW-15C	881.58	881.58	883.50	29.00	29.00	5.00	857.58	852.58	4.31	879.19	4.37	879.13	4.39	879.11	3.95	879.55	4.08	879.42	3.09	880.41	3.39	880.11	3.39	880.11	3.46	880.04
MW-17	885.99	886.09	888.46	9.00	12.00	5.00	881.99	876.99	7.45	881.01	7.45	881.01	7.46	881.00	7.34	881.12	7.41	881.05	6.98	881.48	6.97	881.49	6.97	881.49	7.09	881.37
MW-18	883.95	886.17	889.14	9.00	10.00	5.00	879.95	874.95	8.33	880.81	8.10	881.04	8.03	881.11	7.94	881.20	8.00	881.14	7.64	881.50	7.57	881.57	7.57	881.57	7.68	881.46
MW-19	883.90	883.21	886.88	10.00	12.00	5.00	878.90	873.90	4.87	882.01	4.83	882.05	4.85	882.03	4.76	882.12	4.78	882.10	4.50	882.38	4.30	882.58	4.30	882.58	4.45	882.43
MW-20	882.46	882.55	884.86	9.00	12.00	5.00	878.46	873.46	4.59	880.27	3.94	880.92	5.27	879.59	4.91	879.95	5.03	879.83	3.99	880.87	4.95	879.91	4.95	879.91	4.56	880.30
MW-21	881.93	881.93	884.93	12.00	12.00	5.00	874.93	869.93	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	5.11	879.82
MW-22	881.21	881.55	883.32	10.00	17.00	5.00	876.21	871.21	4.78	878.54	4.78	878.54	5.00	878.32	4.50	878.82	4.76	878.56	3.70	879.62	4.44	878.88	4.44	878.88	4.35	878.97
MW-23	880.26	880.55	882.91	10.00	11.00	5.00	875.26	870.26	3.73	879.18	3.74	879.17	4.08	878.83	3.43	879.48	3.63	879.28	2.67	880.24	3.01	879.90	3.01	879.90	3.04	879.87
MW-24	881.10	881.14	883.72	10.00	10.00	5.00	876.10	871.10	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	3.64	880.08	4.05	879.67	4.05	879.67	4.07	879.65
MW-25	887.51	887.35	889.22	11.00	13.00	5.00	881.51	876.51	7.96	881.26	7.89	881.33	7.87	881.35	7.79	881.43	7.84	881.38	7.43	881.79	7.44	881.78	7.44	881.78	7.58	881.64
MW-26	884.29	885.60	888.93	9.50	12.00	5.00	879.79	874.79	8.59	880.34	8.12	880.81	8.09	880.84	8.95	879.98	8.02	880.91	7.57	881.36	7.59	881.34	7.59	881.34	7.68	881.25
MW-27	885.30	885.30	884.92	15.00	15.00	5.00	875.30	870.30	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	2.98	881.94
MW-27C	885.34	885.34	884.96	35.00	38.00	5.00	855.34	850.34	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	2.97	881.99
MW-28	889.45	889.45	888.94	22.00	22.00	5.00	872.45	867.45	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	5.13	883.81
MW-28C	889.32	889.32	888.87	50.00	50.00	5.00	844.32	839.32	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	4.73	884.14
MW-29	884.34	884.34	886.78	11.00	11.00	5.00	878.34	873.34	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	4.53	882.25
MW-29C	884.20	884.20	886.62	33.00	33.00	5.00	856.20	851.20	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	4.41	882.21
MW-A2	881.10	881.10	884.59	33.00	33.50	10.00	858.10	848.10	5.53	879.06	5.56	879.03	5.78	878.81	5.19	879.40	5.38	879.21	4.41	880.18	4.81	879.78	4.81	879.78	4.83	879.76
MW-B1	886.99	886.99	889.48	18.00	18.50	10.00	878.99	868.99	10.70	878.78	10.76	878.72	10.81	878.67	10.34	879.14	10.55	878.93	9.51	879.97	9.96	879.52	9.96	879.52	9.08	880.40
MW-B2	886.35	886.35	889.65	40.00	40.00	5.00	851.35	846.35	10.02	879.63	9.96	879.69	10.04	879.61	9.67	879.98	9.81	879.84	8.95	880.70	9.33	880.32	9.33	880.32	9.39	880.26
MW-B4	886.38	886.38	889.54	29.00	29.00	5.00	862.38	857.38	9.37	880.17	9.24	880.30	9.32	880.22	9.08	880.46	9.17	880.37	8.52	881.02	8.74	880.80	8.74	880.80	8.80	880.74
MW-BCK1	884.67	884.67	887.11	13.00	13.00	10.00	881.67	871.67	4.78	882.33	4.80	882.31	4.80	882.31	4.71	882.40	4.75	882.36	4.52	882.59	4.39	882.72	4.39	882.72	4.45	882.66
MW-BCK2	885.27	885.27	887.25	40.00	41.00	5.00	850.27	845.27	5.34	881.91	5.34	881.91	5.38	881.87	4.85	882.40	5.33	881.92	4.66	882.59	4.95	882.30	4.95	882.30	5.01	882.24
MW-BCK3	885.58	885.58	887.64	29.00	29.00	5.00	861.58	856.58	4.91	882.73	4.94	882.70	4.93	882.71	5.30	882.34	4.88	882.76	5.09	882.55	4.51	883.13	4.51	883.13	4.59	883.05
MW-C2	886.43	886.43	889.54	44.00	44.00	5.00	847.43	842.43	8.94	880.60	8.82	880.72	5.78	883.76	8.64	880.90	8.73	880.81	8.19	881.35	8.30	881.24	8.30	881.24	8.40	881.14
MW-E2	885.13	885.13	888.73	39.00	40.00	5.00	851.13	846.13	9.22	879.51	9.16	879.57	10.81	877.92	8.84	879.89	9.01	879.72	8.19	880.54	8.45	880.28	8.45	880.28	8.47	880.26
MW-F2	882.56	882.56	884.33	45.00	45.00	5.00	842.56	837.56	5.24	879.09	5.27	879.06	10.04	874.29	4.89	879.44	5.04	879.29	4.19	880.14	4.37	879.96	4.37	879.96	4.46	879.87
MW-F5	884.81	884.81	886.88	30.00	30.00	5.00	859.81	854.81	5.69	881.19	5.76	881.12	9.32	877.56	5.33	881.55	5.53	881.35	4.53	882.35	4.94	881.94	4.94	881.94	4.98	881.90
MW-G1	883.61	883.61	885.28	17.50	17.50	10.00	876.11	866.11	-	-	5.64	879.64	8.85	876.43	5.01	880.27	5.28	880.00	4.26	881.02	4.81	880.47	4.81	880.47	4.95	880.33
MW-G2	881.60	881.60	883.92	45.00	45.00	5.00	841.60	836.60	-	-	3.71	880.21	9.32	874.60	3.41	880.51	3.51	880.41	2.96	880.96	2.95	880.97	2.95	880.97	3.05	880.87
MW-G4	885.07	885.07	886.89	18.00	19.00	10.00	877.07	867.07	-	-	4.70	882.19	5.40	881.49	4.01	882.88	4.65	882.24	4.41	882.48	4.30	882.59	4.30	882.59	4.36	882.53
MW-J2	885.31	885.31	888.66	38.00	39.50	5.00	852.31	847.31	9.18	879.48	9.12	879.54	5.91	882.75	9.05	879.61	8.97	879.69	8.15	880.51	8.41	880.25	8.41	880.25	8.44	880.22
MW-J3	884.81	884.81	888.94	28.00	28.00	5.00	861.81	856.81	9.48	879.46	9.41	879.53	5.84	883.10	8.81	880.13	9.22	879.72	8.39	880.55	8.67	880.27	8.67	880.27	8.72	880.22
MW-OS1	880.72	880.72	882.92	10.00	10.00	5.00	875.72	870.72	4.41	878.51	4.57	878.35	3.85	879.07	3.98	878.94	4.16	878.76	3.06	879.86	3.49	879.43	3.49	879.43	3.55	879.37
MW-OS1C	880.25	880.25	882.19	32.00	44.50	5.00	853.25	848.25	3.29	878.90	3.32	878.87	4.71	877.48	2.89	879.30	3.05	879.14	2.08	880.11	2.42	879.77	2.42	879.77	2.48	879.71
MW-OS3	881.30	881.30	884.31	10.00	10.00	5.00	876.30	871.30	5.75	878.56	5.87	878.44	9.27	875.04	5.29	879.02	5.44	878.87	4.22	880.09	4.63	879.68	4.63	879.68	4.73	879.58
MW-OS3C	881.48	881.48	882.78	38.00	38.00	5.00	848.48	843.48	4.10	878.68	4.19	878.59	9.50	873.28	3.65	879.13	3.80	878.98	2.68	880.10	3.08	879.70	3.08	879.70	3.14	879.64
OW-16	883.00	883.00	885.53	11.72	NA	NA	NA	871.28	-	-	5.98	879.55	5.93	879.60	Sampled 10-17-03	Dry	11.20	874.33	8.90	876.63	7.17	878.36	7.17	878.36	6.36	879.17
SG-2	NA	NA	880.81	NA	NA	NA	NA	NA	-	-	2.35	878.46	2.43	878.38	1.95	878.86	2.14	878.67	0.95	879.86	2.92	877.89	2.92	877.89	1.75	879.06
SG-4	NA	NA	878.83	NA	NA	NA	NA	NA	-	-	1.88	876.95	1.94	876.89	1.45	877.38	NA	-	0.54	878.29	1.43	877.40	1.43	877.40	Under Water	878.83
SG-5	NA	NA	883.32	NA	NA	NA	NA	NA	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	4.21	879.11	4.21	879.11	4.26	879.06
SG-6	NA	NA	884.99	NA	NA	NA	NA	NA	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	Not Installed	-	3.73	881.26	3.73	881.26	3.82	881.17

Note: NA - Not Available
- - Measurment not recorded
TOC - Top of Casing
TD - Total Depth
GS - Ground Surface
SG - Staff Gauge

Table 3-1
Monitoring Well Inspection Checklist
Former Stanley Tools Site
Fowlerville, Michigan

Well Number: __________ Inspector: ______________________________ Date: ______________

A. Is the access route to the well passable? ______________________________

B. Is the vicinity of the well clear of brush debris? ______________________________

Runoff Diversion Apron

A. Is the grout in good condition? ______________________________

B. Approximate diameter of apron: ______________________________

C. Does apron completely surround well casing? ______________________________

D. Does apron promote fluid drainage away from well bore? ______________________________

E. Are fluids being funneled into annular space around well casing? ______________________________

Well Riser

A. Is well riser intact? ______________________________

B. Is the well riser cracked, broken or bent? ______________________________

C. Is the well riser lifted? ______________________________

D. Is the survey mark visible for water level measurement reference? ______________________________

E. Is the riser cap in place and in good condition? ______________________________

Protective Well Casing

A. Describe the condition of the protective casing (intact, cracked, broken, bent, or lifted?) ____

B. Is protective well casing lid equipped with a working lock? ______________________________

C. Are the drainage or weep holes clear? ______________________________

D. Is the well designation clearly visible on the outside of the protective casing? ____________

Well Siltation

A. Is the measured total depth of the well consistent with construction records? ______________

B. Does silt or sand exceed 6 inches in thickness on the well bottom? ______________________

Additional Observations and Remarks: ______________________________

____

____

____

____

____

____

Table 3-2
Monitoring Well Corrective Actions
Former Stanley Tools Site
Fowlerville, Michigan

Negative Finding	Corrective Action
General	
Inaccessible well	Notify appropriate site contact to remove obstructions
Runoff Diversion Apron	
Poor Grout Condition	Replace Grout
Diameter of Apron < 6 inches	Replace Apron
Broken Apron	Replace Apron
Sunken Apron	Replace Apron
Well Riser	
Broken Riser	Determine Cause and Replace Riser
Lifted Riser	Determine Cause and Replace Riser
Unclear Survey Mark	Resurvey New Mark
Missing or Damaged Riser Cap	Replace Riser Cap
Protective Well Casing	
Broken Casing	Repair or Replace Casing
Casing Lid Missing Lock or Lock Inoperable	Replace Lock
Obstructed Drainage Holes	Clear Obstruction
Poorly Visible Well Designation	Relabel Well with Correct Designation
Well Siltation	
Difference of Measured Total Depth of Well and Historical Total Depth > 6 Inches	Remove siltation from well bottom.

Table 3-3
Well Purging and Sampling Field Data Sheet
Former Stanley Tools Site
Fowlerville, Michigan

Date	Sample Time	Well ID	Total Depth	Water Level	Purge Rate	Purged Volume	Turbidity	Eh	Dissolved Oxygen	pH	Conductivity	Temperature	Comments
													color:
													sheen: yes no
													odor: yes no
													color:
													sheen: yes no
													odor: yes no
													color:
													sheen: yes no
													odor: yes no
													color:
													sheen: yes no
													odor: yes no
													color:
													sheen: yes no
													odor: yes no
													color:
													sheen: yes no
													odor: yes no

______________________________ Page ___ of ___

Appendix A
Laboratory Quality Assurance Project Plan

Available upon request